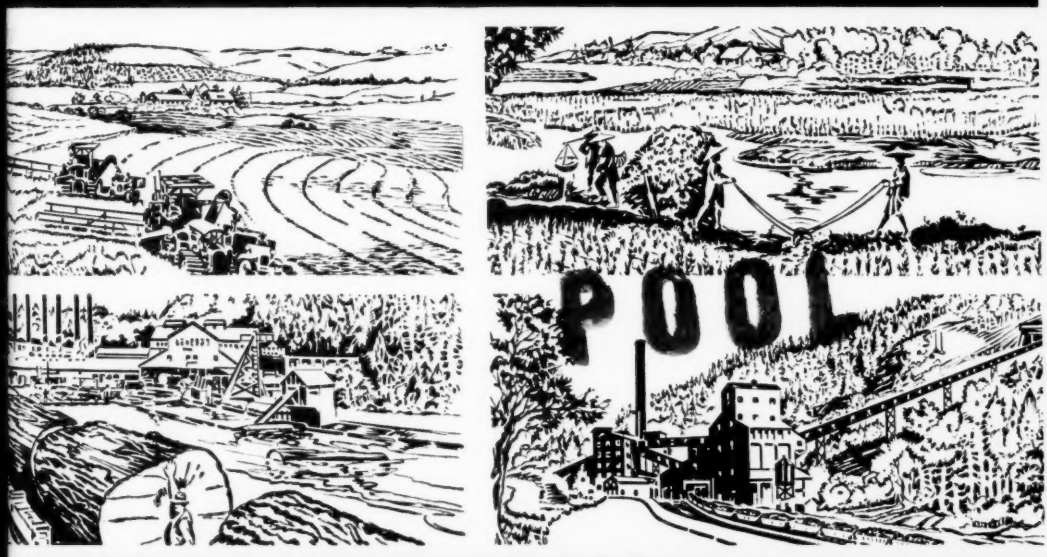
JOURNAL of GEOGRAPHY

for Teachers of
ELEMENTARY,
HIGH SCHOOL
and COLLEGE
GEOGRAPHY

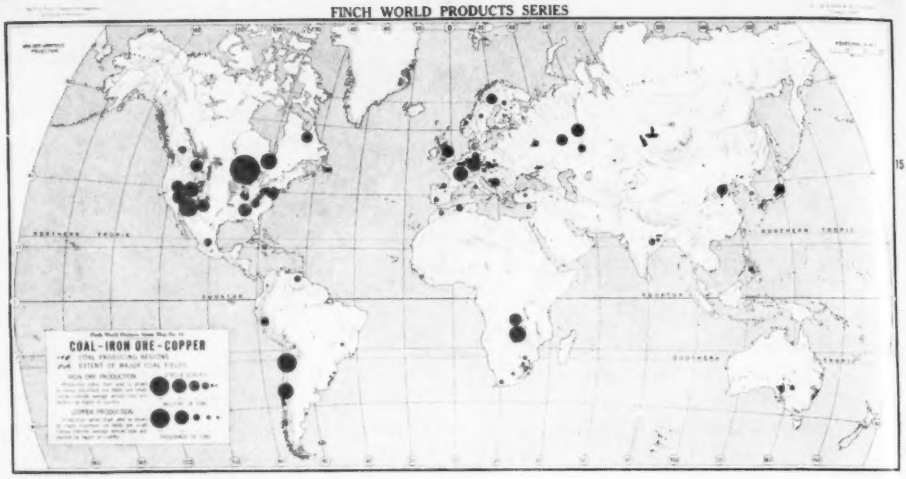
SOCIAL SCIENCES
DEC 27 1961

Volume LX
December, 1961
Number 9



PUBLISHED BY
A. J. NYSTROM & CO.
THE NATIONAL COUNCIL FOR GEOGRAPHIC EDUCATION
THOMAS FRANK BARTON, EDITOR

FINCH WORLD PRODUCTS SERIES



TEACH WITH NYSTROM WORLD PRODUCTS MAPS

Here is a comprehensive picture of distribution of the world's major agricultural and mineral resources . . . presented in a series of eighteen large (50 x 32-inch) colorful wall maps. The current edition has been recently revised to incorporate the latest available data on production and distribution. Primary and secondary production areas are shown for such basic products as oil, iron ore, corn, wheat, and rice. The areas favorable for production and development of resources can be quickly and easily identified. Each map presents basic reference material as well as valuable information to supplement geography textbooks.

36 Mounting. Set of 18 maps, on manila stock, in chart head, with tripod $65.50

02 Mounting. Single map on spring roller with steel board and dustproof cover $13.25

Have you seen Around the World, our free in-service publication for geography teachers? In the current issue, a specialist in geography curriculum demonstrates how World Products maps can be used in environmental relationship studies. To receive a sample copy, write today for pamphlet No. JG-1261.

TITLE	NO.
Average Annual Rainfall	FW1
Density of Population	FW2
Principal Uses of Land	FW3
Wheat and Rice	FW4
Corn and Rye; Rubber	FW5
Barley, Oats, Grain Sorghums, Millets	FW6
Vegetable Fibers	FW7
Vegetable Oils	FW8
Starch Foods	FW9
Beverage Crops	FW10
Sugar and Tobacco	FW11
Fruit Crops	FW12
Cattle and Dairying	FW13
Sheep and Swine	FW14
Coal, Iron Ore and Copper	FW15
Petroleum and Water Power	FW16
Political Map and Ocean Trade	FW17
Railroads	FW18

A. J. NYSTROM & CO.

3333 ELSTON AVENUE • CHICAGO 18, ILLINOIS

Mention the JOURNAL—It Assures Service

The JOURNAL *of* GEOGRAPHY

CONTENTS FOR DECEMBER, 1961

Articles

Geography and Resource Management.
By Ruben L. Parson 399

Dr. Parson is an associate professor in the Department of Earth Science at Northern Illinois University. In addition to his many activities in conservation, he is Chairman of the Curriculum Development Committee of the Conservation Education Association. He is well known for his college texts in conservation.

The Significance of Tropical African Resource Development.
By Hibberd V. B. Kline, Jr. 406

Dr. Kline is Professor of Geography and Chairman of the Department of Geography, University of Pittsburgh. He has had many first-hand experiences in Africa.

Geographic Background to Current Developments in West Africa.
By Ernest Amano Boateng 411

Professor Boateng is Senior Lecturer in Geography, University College of Ghana, Accra. He was Visiting Professor at the University of Pittsburgh in the Fall of 1960 and at the University of California at Los Angeles in the Spring of 1961.

High School Geography Textbooks (1918-1941) and Their Relationship to Classroom Instruction.
By Herbert L. Zobel 416

Mr. Zobel as an Assistant Professor, Eastern Michigan University, Ypsilanti, specializes in geographic education, urban geography, and Anglo America. He has done his graduate work at Illinois State Normal University and Northwestern University.

The Areal Analysis: A Second Step Toward Critical Thinking in High School Geography.
By Wilbur J. Switzer 420

Mr. Switzer, who holds A.B. and M.A. Degrees from Long Beach State College, is Chairman of the Social Science Department in the Los Altos High School, La Puente, California. His article entitled "The Map Exercise as a Basis for Critical Thinking in High School Geography" appeared in the October, 1960 issue of THE JOURNAL OF GEOGRAPHY.

Geography and General Education.
By Robert H. Fuson 422

Dr. Fuson is Assistant Professor of Geography at the University of South Florida. He did his graduate work at the Florida State University and Louisiana State University. His specialities are Latin America, tropical geography, and cultural anthropology.

Resources, Economy and Conservation.
By William Goodwin 427

Dr. Goodwin who teaches at the University of Wisconsin, at the Milwaukee Center, specializes in Anglo America, manufacturing, and Asia.

Elementary and Junior High School

Geography in Mid-Century: An Account of a Year of Progress in Upgrading Geography Instruction in the New York City Junior High Schools.
By Joseph O. Loretan 429

Dr. Loretan is Associate Superintendent of the Board of Education of the City of New York and is the head of the Division of Junior High Schools.

General

National Council at Work 435

Awards 435

Geographic Materials Received 437

Book Reviews 437-438

Contents of the JOURNAL are indexed regularly in the *Educational Index to Periodicals.*
Authors alone are responsible for opinions and statements in the JOURNAL.

PRINTED IN THE U.S.A.

The JOURNAL *of* GEOGRAPHY

THOMAS FRANK BARTON, *Editor*
GEORGE J. MILLER, *Assistant Editor*
Indiana University, Bloomington, Indiana

Associate Editors

EARL B. SHAW, Assumption College, Worcester, Mass.
NEVILLE V. SCARFE, University of British Columbia, Vancouver
R. S. FUNDERBURK, Central Washington College of Education, Ellensburg
MARY VIOLA PHILLIPS, University of Pittsburgh
JOHN W. MORRIS, University of Oklahoma
ROBERT C. KINGSBURY, Indiana University
ZOE A. THRALLS, University of Pittsburgh
HENRY J. WARMAN, Clark University
CLYDE F. KOHN, University of Iowa
OTIS W. FREEMAN, Apt. 306, 2609 West Montlake Place East, Seattle 2, Washington
MAMIE L. ANDERZHON, Indiana State College, Indiana, Pennsylvania
JEWELL PHELPS, George Peabody College, Nashville, Tennessee

National Council for Geographic Education

JEWELL PHELPS, *President*, George Peabody College, Nashville, Tennessee
LORRIN G. KENNAMER, *Secretary*, University of Texas, Austin, Texas

SUBSCRIPTION TERMS

The subscription price is $5.00 a year payable in advance. The price of single copies is 60 cents. Postage prepaid on subscriptions from the United States and dependencies. All other countries in the Postal Union add for postage 70¢ on annual subscriptions (total $5.70 plus exchange), on single copies 5¢ (total 65¢). All subscriptions are payable in United States Dollars. Where payment is made in other than United States currency, add 45¢ additional for exchange. Postage to countries in South America remains the same (55¢), but the exchange rate must be added.

The JOURNAL is the official organ of the National Council for Geographic Education and is sent to all members. The annual dues, $5.00, are payable to the JOURNAL OF GEOGRAPHY. Extra postage rates for copies sent to foreign countries should be added to the membership dues. Make all remittances payable to the JOURNAL OF GEOGRAPHY, in postal or express money orders or bank drafts. Send payments to Miss M. F. Sweeney, A. J. Nystrom and Company, 3333 Elston Avenue, Chicago 18.

Send manuscript and books for notice or review to the Editor.
Send orders for back numbers to JOURNAL OF GEOGRAPHY.

Published monthly except June, July and August
PUBLICATION OFFICES: CURTIS REED PLAZA, MENASHA, WISCONSIN
Business Correspondence, Membership Dues, and Subscriptions may be sent to Publication office or to

A. J. NYSTROM AND COMPANY
PUBLISHERS, JOURNAL OF GEOGRAPHY
3333 ELSTON AVENUE, CHICAGO 18

Second-class postage paid at the Post Office at MENASHA, WISCONSIN, under the Act of March 3, 1879.

JOURNAL OF GEOGRAPHY PRIZE TO AUTHORS

Annually a Geographic Education Prize of $25.00 is awarded for outstanding articles published in the JOURNAL. In the even numbered years the prize is for the Elementary level and in the odd years for the High School level.

WEATHER INSTRUMENTS

Amateur and
Weather Bureau Types

Complete installations for
schools from $59.50 to $2895.00
Write for catalog

SCIENCE ASSOCIATES
Instruments/Weather • Astronomy/Teaching Aids
194 NASSAU STREET P.O. BOX 216 PRINCETON, N.J.

The JOURNAL *of* GEOGRAPHY

Copyright 1961, by the National Council for Geographic Education

VOLUME LX DECEMBER, 1961 NUMBER 9

GEOGRAPHY AND RESOURCE MANAGEMENT*

RUBEN L. PARSON
Northern Illinois University

THE following discourse contains no gems of new knowledge for a geographer; it was prepared for a public audience. However, the geographer may find here a few ideas to bolster his stock-interest in natural resources and their rational utilization; and it is certainly for this purpose that the Editor deemed it worth printing.

The geography of resource management has been my main career interest, both as teacher and practitioner; and most of my life is already invested in it. The investment has been tremendously rewarding in terms of intangible dividends, and those I would share with anyone interested.

I use the term "resource management" advisedly, and urge you to discriminate between its connotation and the vague meaning of "conservation," a popular term that has become confused with nature study and outdoor education. Resource management means exactly what it says; but its systematic projection is often identified as "planning," a field of activity involving the same facets of geography.

By way of approach to my subject I should like to offer three premises for your consideration: (1) that we need qualified generalists to orient and direct our specialists, (2) that geography is a general discipline, unique in scope and synthesis, and (3) that the generalist geographer has a clear responsibility in the coordination of resource management.

* Adapted from an address delivered at Indiana State College, Terre Haute, 21 February 1961, on the occasion of dedicating a new Science Building.

Specialists Develop Narrow Perspectives

My first premise involves our entire educational system. We live in a wonderful, accelerating age of technology, automation, and mechanization, and we owe much of this amazing culture stage to specialization. It was initiated by men who devoted their lives to fine-drawn lines of inquiry. We need an increasing number of specialists to insure continued progress; but even more urgently we need generalists, men with broad perspective, based on comprehensive rather than specialized training. We need more men who see trees as mere components of the forest. We need more men competent to focus the work of many specialists on one desirable objective, men conversant with many fields and biased toward none. When a statesman asks a mathematician for advice on foreign affairs, I become suspicious that he is merely a politician who never studied political science. And when a nuclear physicist tells me how efficiently reactors operate, I suspect that he is innocent of economics. But unless we have a sufficient corps of generalists, trained and recognized, we shall seek from science specialists the judgments and decisions they are not competent to make.

Geographers Deal With Composition

My second premise is a bold-faced assertion that my profession serves as a

common meeting ground for many specialized disciplines. Geography is a field of science wide as the world and about as general as any body of knowledge can be. Mind you, all geographers do not consider themselves generalists; but geographic generalization is the idea pertinent to this discussion.

A Geographical Illiterate Public

Regrettably few Americans know what geography is or what geographers do. Many remember geography only as a recitation of places and boundaries in the fourth grade. Some ridicule it as a nonentity; others hold it in utter contempt. A geographer must become innured to ridicule! I remember vividly my first exposure to this tempering process when, as a young bachelor, I attended a faculty tea for new professors. One by one, the old maids and young widows engaged me in small talk, and one by one, they were disillusioned. Although their thoughts were of moonlight and romance, the occasion seemed to demand that they inquire into my profession. And at the mention of geography, the gleam left their eyes, their noses went up, and they excused themselves, concluding that a Ph.D. in a fourth-grade subject must certainly indicate awkwardness as well as stupidity.

Geographic Prospect Brightest

Aside from its frustrations, geography can be a most challenging and gratifying profession. A few mental giants have become famous as geographers, and even the rank and file of us, with a modicum of intelligence, can serve with pride and gain a sustaining satisfaction from our work. Geography demands no special skill or aptitude; however it does require devotion and perseverence. Unless a student possesses certain qualifications he would be a failure even in geography. If he has a consuming curiosity about the world and how it hangs together, a willingness to read and work diligently, a determination to be informed on major issues in a score of related fields, and a kindly disposition toward other workers even when they snub him—only then should he consider becoming a geographer.

Those of you already embarked on a geography career may proceed with confidence because the prospect for American geographers has never been brighter than now. For instance, the City of Chicago began two years ago a search for several hundred high school teachers with masters' degrees in geography. Of the handful that applied, only a score qualified, and less than a dozen accepted positions. The search is continuing. Considering that demands outside teaching are also growing, my secret fear is that the market will so far exceed our supply that requirements will have to be revised. Geographers constitute such a small fraternity that they have often been displaced by the sheer force of numbers. Unfortunately, few geographers have aspired to administrative positions that determine educational policy.

Arbiter Between Science and Society

By definition, "geography" means simply "earth description," and in fact, description alone may be a worthy contribution. The composite attributes of any place or region, observable differences between one area and another, environmental relationships within a region and between regions—these are typical subjects for geographic investigation and interpretation.

Geography has evolved through about the same stages of development as other sciences. Beginning with description, it proceeded to *interpret* what it described. Then it ventured to *predict* what would happen in a given situation; and finally it has presumed to *control* the eventualities! This control idea is, of course, the basis for geography's role in resource management and planning.

Geography has been called the coordinate science, the synthesizing discipline. Properly, it functions as the intermediary between the natural and social sciences, and borrows freely from both fields. Academically it explains the physical and cultural elements of our environment and human reaction to that environment. In application it seeks to improve the environment and refine our adjustment to it. Man is the focal interest of geographers; to better understand him and enhance his proprietorship over the earth they integrate many kinds of knowledge from all available sources. This integration of elements from several disciplines to illuminate a central issue stands, I believe, as geography's most distinctive contribution. *Composite comprehension is the unique quality of geography.* The geographer must always build on a firm foundation of such natural and earth sciences as meteorology, climatology, oceanography, geology, geomorphology, ecology, and pedology. (Climate, rocks and minerals, water bodies, landforms, vegetation, and soils are the fundamental elements of natural environment). On this foundation man has developed his multiplicity of cultures, each influenced by natural conditions and resources, and their world pattern generally coincident with natural arrangements. This is the geographer's line of departure! In essence, he wants to know how men live in a certain environment, why they live that way, and whether they might live better. He seeks help from history, sociology, anthropology, demography, economics, psychology, political science, and other traditional disciplines. He enlists such applied sciences as engineering, medicine, agriculture, forestry, fishery science, commerce, and education. He attempts to trace from the past the persistent influences of geographic environment, and project forward the constant refinement of cultural response to factors both human and natural, including our increasing capacity for environmental modification and manipulation. Our continual sophistication and technologic progress challenge no one more than the geographer!

Geographers have no qualms of conscience when they take from related natural or earth sciences. Geography is actually the mother science that spawned most of them. Geology, ecology, oceanography, pedology, and meteorology were branches grown large on the geography tree before they broke off and took root by themselves. Climatology and geomorphology are sprouts still largely shaded by the mother tree.

In dealing with the social sciences, geographers count on bargaining power, because they ask only fair exchange, returning in kind about as much as they borrow. History that ignores the geographic setting becomes a supercilious chronology of events in vacua. (Toynbee's bid for immortality would be better assured if he were less scornful of geography.) Without the geographic concept, economics and sociology would be confined to unrelated, isolated situations; anthropology would have neither origin nor direction; demography would be a compilation of statistics with half the meaning they ought to have; political science would lack the sturdy factors of location, size, shape, and definitive boundaries. All these disciplines are well served by geography, and in turn that which I consider genuine geography would have neither purpose nor function without them. I should like to see the mutuality that already exists considerably strengthened, because I believe it would profit all the parties. Geography is a logical agent for inter-disciplinary exchange and can preside equably and judiciously where many interests must be reconciled. Nowhere is this geographic faculty better exploited than in the appraisal and management of natural resources.

Resource Management Puts Geography To Work

My third premise concludes that resource management is simply a practical application of traditional geography. Having made a case for generalists, and belabored the idea that geographers are, or ought to be, professional generalists, I should now like to explain how geography serves as coordinator of resource management. First of all, consider that all natural resources—water, soils, forests, grasslands, wildlife, esthetic features, minerals, and marine wealth—are simply components of the environment over which man presides. Natural resources are the entire basis of our material culture. We make our living by exploiting them for useful purposes. To make them serve us better is the intent of resource management. Since they are disposed all about, over, and under the landscape and often intricately related, any adequate appraisal of them must be comprehensive, considering all in relation to each other. An appraisal, often referred to as an inventory or a survey, becomes the first step toward a plan for resource management. This comes immediately within the province of geography, because a resource survey differs little from plain geographic description except in point of view. Description may be academic; the survey should be practical and no less attentive to social and economic implications than to natural phenomena. The object of the whole business is human benefit, just as man is the focal interest of conventional geography. There can be neither geography nor resource-management without the human element.

The association of natural resources revealed by a survey demands a commensurate integration of their development and management. If one resource is manipulated without regard for the others, the singular improvement may be much less than the over-all damage. Unity must be respected, coordination effectively maintained. For the critical coordinating function the geographic generalist is especially well qualified. He formulates his recommended program on the basis of all contributing factors, both natural and cultural, often assembled on maps the better to see relationships. One question pervades his entire effort: "Which management program will bring optimum benefit to the most people for the longest time?" His greater concern with human welfare and dignity than with the entire wealth of earth materials distinguishes him from the resource-oriented specialist.

If you will bear in mind that I am not disparaging the important work of specialists, I should like to cite a few ways in which they fail when they attempt to resolve resource problems independently. Sometimes the wildlife expert becomes so enamored of animals that he forgets the landowner that harbors them. When he wants brush where corn should grow, the righteously indignant farmer laughs at him. Business or industrial economists are inclined to be too coldly calculating, obsessed with an urge for profit. They often promote such a short-lived enterprise as mining without adequate concern about consequences when the mineral runs out. Mine closure then forces the planners into a crash program to rehabilitate the withering community, often doomed to failure for lack of coordinated planning from the beginning. The efficiency expert cannot always appreciate our need for nature areas and aesthetic resources that yield only intangible benefits. The nature enthusiast, on his part, may be equally bigoted in point of view. Apparently oblivious to the fact that we shall live in an increasingly artificial and manipulated environment, he seems determined to regain natural balance on the earth even if he must put all of mankind in orbit. Conscientious, well-meaning men trained or interested in

only one type of resource have often obstructed resource management in general. Disagreement among specialists is inevitable; indeed a specialist who does not disagree with anyone is probably worthless. However, differences should be reconciled before they waste valuable time and compromise a program that is, by and large, meritorious. A generalist arbiter should be responsible for conflict resolution, because two-sided debate often generates more heat than compromise. In a recent conference between biologists and economists concerned with the Pacific halibut fishery, one economist was moved to remark, in effect, that biologists have more regard for fish than for fishermen. At such meetings, seeking concert between natural and social scientists, a resource geographer, viewing both sides from the middle, might be useful as moderator. On many issues the geographers join forces with biologists and economists to counter ill-conceived campaigns. For instance, they often stand together against those vainglorious engineers who, unprovoked, wage perennial war on natural waters with scorched-earth tactics. The defense of good judgment on relative resource values must be well organized to contain bureaucratic maneuvers.

Resource Management Implements National Policy

Resource geography has world-wide compass; resource management becomes directly involved with international affairs and world problems. Here one might consider the comparative resource status of every sovereignty, and organize the information on the basis of idealogical blocks, a facet of political geography; but here I shall limit myself to a few observations only.

I believe, for instance, that we need not fear Red China's threat to world freedom so long as much of her land lies wasted and her wealth of other resources remains but poorly developed. However, should she, under communistic regimentation, slip the noose of hunger sufficiently to have a reserve of energy for resource management, her potential danger to the world would be frightening. If by plowing her cemeteries, applying technology to her soils and agriculture, and recovering her vast denuded areas she could be adequately fed to build a modern complex of heavy industry and transport facilities, her redundant population would compete in the world markets and the "red-and-yellow peril" would become a monstrous reality. The possibility remains speculative, but trends demand our constant surveillance and vigilance.

Perhaps most immediately vital to world freedom is the future of emergent sovereignties in Negro Africa; and their prospect may well depend on the source of aid and direction for optimal development and management of natural resources. Here lies the best opportunity I've ever known for Americans to be at once magnanimous and selfish with the same money; the greater our munificence, the more secure our investment. We should arrange to station in Africa thousands of American resource managers such as I have mentioned. We should train each of them to speak fluently at least one tribal language before assignment. Many of them should be Negroes. Generalists should go first, to appraise the situation; then they should be furnished specialists to deal with particular resource problems and opportunities. Establishment of such a program could be a sure foundation for peaceful progress.

Human welfare about the world depends in large measure on the availability and conversion of materials; its continuation and improvement depend in like degree on resource management. Resource management must even absorb the shock of "population explosion" until we learn to control it. Regional relationships between population trends and production trends constitute practical prob-

lems of contemporary world geography. We are waging economic war on a world scale; and the munitions for such warfare come from natural resources.

American supremacy as a world power in this era of materialism was derived from a vigorous exploitation of fabulous natural wealth. Our future stature as a nation will be largely determined by the intelligence with which we manage the resources remaining at our disposal. This must be a continuing process, and it will always have flaws in it; however we have made such progress in a few decades that certain American projects and methods are models for the world. We may be proud of our accomplishments and optimistic about our prospects. To me, the most amazing phenomenon in this fabulous United States is our determined improvement of the resource base even while plagued by excessive productivity. Such vision, freely implemented, is certainly a credit to democracy! We are making good progress with resource management in the United States, and geography contributes substantially to the program.

Geography Contributes Techniques and Ideas for Cultural Progress

Geography probably originated in ancient Egypt when it became necessary to identify, measure, and appraise the fertile fields of the Nile for purposes of taxation. It gave early traders, navigators, and conquerors their knowledge of distance and direction by evolving the art of graphically representing a known portion of the earth's surface on a much smaller surface called a map. Whether map-makers became geographers or geographers became map-makers, I do not know; but the craft has always remained a part of the profession. Today's map-makers call themselves cartographers, but their work is none-the-less geographic. A map is a geographic device, whatever it depicts and whatever its function. Maps are essential aids to the resource manager or planner, be they the simple colored drawings showing farm plans for soil conservation or the detailed and costly topographic models often cast in plastic for metropolitan or regional planning.

Since maps are one of their primary tools, it follows that geographers are especially proficient in the compilation of mappable information and its intelligible representation with appropriate symbols, codes, and color schemes. In the early days of T.V.A. geographers mapped the entire valley for land classification, using a field legend of 22 graduated items. Later the Soil Conservation Service adapted such a coded system to "land capability classification," now a standard guide to farm planning everywhere in the country. This represents only one of many geographic techniques with uncommon functional value.

In addition to tools and skills, geography contributed to resource management and planning certain indispensable concepts. The idea of multiple-use that is becoming increasingly prominent in various resource fields is clearly geographic, deriving directly from the environmental unity I mentioned earlier. Its importance is attested by several Acts of Congress requiring coordinated development of associated resources. Public Law 566 as amended, and the Multiple-Use Forestry Law enacted in 1960 are good illustrations.

Regionalism is probably the most valuable geographic concept applied in resource management and planning, an idea profoundly versatile and flexible, both academic and utilitarian. There are as many kinds of regions as there are courses in the education curriculum, so I shall mention only a few with demonstrated pertinence to my subject. River basins and watersheds, naturally defined by topographic divides, have become a geographic basis for unified planning and development of drainage regions.

The migratory habits of certain fishes prompted regional organization for the management of our marine fisheries—Atlantic, Gulf, and Pacific. The mobility of Great Lakes aquatic life compelled us to negotiate a treaty for regional cooperation with Canada. Acknowledging the continental itineraries of certain waterfowl and other birds, we signed a Migratory Bird Treaty with both Canada and Mexico. Natural regionalism often demands coincident administrative or operational regionalism in resource management. The geographic concept *will* prevail!

Industrial regionalism stems from so many complexities, both natural and cultural that I hesitate to introduce it for fear of conveying a false notion of simplicity. However, I am moved to recall a few classic examples. Regional resource geography sited the incomparable steel center of Gary; it provoked fifty years of sectional debate on the St. Lawrence Seaway, and finally built it; and now it has brought aluminum plants to the Ohio Valley. On every hand one sees industry responsive to geographic regionalism, and regionalism, in turn, modified by industry. The culture pattern reflects the resource pattern, with a fidelity or distortion amenable to geographic analysis. Change in one pattern foreshadows change in the other, so that their geographic correlation is rarely static. The regional planner must anticipate impending changes and revise his plan to meet them. He *must* know geography!

I might submit many other geographic skills and ideas employed in resource management and planning, but I wish to conclude very shortly, and in a more modest vein, lest you think I hold my profession above reproach. Indeed, I might take equal time to deplore the faults and failures of resource geography, but this would malign many of my colleagues, and especially those with only a passing interest in resource management, planning, and programming. I *can* assure you that more projects have been bungled without the benefit of geography than with it. Men in authority, lacking acquaintance with geography, have often appointed specialists to direct planning and have ended up with lop-sided plans.

Once in charge, the self-assured architect or engineer develops a plan according to his own professional specialization and often neglects to avail himself of the geographer's perspective and techniques.

Modifying the Orthodox

Whether geographic or otherwise, there are many changes and innovations I should like to see. That part of our space budget blasted off just to display our technologic posture I should like to see diverted toward an inventory of earth resources of land and sea. I am less interested in mapping the moon than in mapping marine vegetation, for instance. I should like to see a much closer integration of city and regional planning, recognizing the interdependence of a metropolis and its hinterland. Soil and land capability maps may have as much value for urban development as for agrarian land use. I should like to see less drainage of land to swell our crop surplus and a considerable rehabilitation of wetlands for ducks and geese until such time as we may need the space for corn and wheat. Long after the Soil Bank expires we might pay Dakota and Minnesota farmers an annual indemnity for sloughs that serve as breeding grounds for waterfowl. I should like to see so-called reclamation projects in the dry West postponed until we need the produce from additional irrigation. Reservoirs now supplying water to lands producing surplus crops may be filled with silt and quite useless before we ever have a real need for them. I should like to see all stripped lands smoothed out as mining progresses; deep mines back-filled with slag to prevent subsidence of the land after their abandon-

ment. I should like to see long-range planning for the inevitable transition from dependence on exhaustible resources to those that are renewable or perpetual. I should like to see the programming of resource-use systematically accomplished both regionally and nationally. I should like to see a few geographers advising the economists who advise the President! I should like to see standard factory equipment on all motor vehicles to prevent air pollution by exhaust fumes. I should like to see a wholesale planting of trees in all vacant spaces to neutralize excessive carbon dioxide in the atmosphere. I should like to see nuclear reactors outmoded by safe, efficient energy conversions. Then I should like to see some of that power used to pump sea water through a giant network of pipelines, to extract and process the minerals and organics, and deliver fresh water wherever needed. I should like to see conservation preventive rather than remedial. I should like to see the entire American landscape so well kept that we might view it with pleasure and exhibit it with pride. I should like to see useless political boundaries eliminated and our administrative pattern arranged more logically. But, more than anything, I should like to see the moral fiber of America exalted above all of our material wealth!

THE SIGNIFICANCE OF TROPICAL AFRICAN RESOURCE DEVELOPMENT

HIBBERD V. B. KLINE, JR.
University of Pittsburgh

THE African nations' avalanche to independence, so evident in the year of 1960, brought two-thirds of the land, over 70 per cent of the peoples, and 21 states of tropical Africa to self-government, full-sovereignty, and freedom from the rule of non-Africans. Perhaps everyone has witnessed or participated in discussions of the wisdom and of the timing of independence for Black African countries. This is a futile activity: the emotional needs of the African people to assert their equality before the world are so strong that arguments about "readiness" and "institution building" and association with a world power on the basis of self-government but not independence are to no avail. The avalanche which started in tropical Africa with Ghana in 1957 and Guinea in 1958 no doubt reached maximum velocity in 1960, but it will continue to sweep on and on until even the African outposts of Portugal and Spain will be engulfed. The critical areas in terms of world tensions will be those where European peoples and European investments are important segments of the population and of the economy. Turmoil, inadequacy, inconsistency, internal conflicts, international disputes among African nations are to be expected: but no amount of external criticism is going to restore the status quo of the days before the avalanche. It is much more to the point to discuss the "newly independent nations in an emerging Africa" (to use the popular cliche) with the objective of exploring the possibilities for their viability, growth, and maturation. This paper is designed to present the point of view that resource development is basic to the success or failure of the new tropical African nations.

The Changing Role of Resources

The peoples of tropical Africa traditionally have been sustained by relatively

simple and direct relationships to the resources of the soil and the vegetation; that is, they have engaged in subsistence agriculture and pastoralism. This so-called "traditional economy" is characterized by low income, both per capita and for the economy; disguised unemployment with no apparent labor surplus; a dearth of specialized occupations because the family or other social unit supplies most of its needs from its own resources and labor; and high birth rates and high death rates.

Almost everywhere in tropical Africa, this highly stable system has been exposed to pressures, at first external but increasingly internal, to concentrate on the production of a small number of particular items which can be exported (cocoa, palm oil, coffee, cotton, sisal, etc.) or can be consumed within Africa by non-traditional economies such as the urban areas and mines (maize, beef, fish). Another pressure on the traditional economy is to furnish labor, particularly for mining, but also for public works. Although there still remain considerable areas of tropical Africa where the traditional economy prevails, most African peoples have had their lives and livelihoods transformed by the demands for their products and their labor, and by their exposure to education, medical care, and other peoples and other ideas. The newly emerging "wants" of the African peoples include, of course, the want to be independent. Except for occasional nostalgic longings for the "old ways," the wants of individual Africans are those common to ourselves: an ever-better standard of living, more individual opportunity to be successful (however that may be defined), more security, and a longer life and a better life for our children. Furthermore, it is always implicit—and often explicit—in the understanding of African peoples that the way a nation-state achieves its economic goals is through industrialization. The objectives of the new African nations are clear: become internally strong and unified, become industrialized, take one's place among the advanced nations of the world. How are these objectives to be attained?

Bases for Economic Development

Adequate capital is a necessity for economic progress. It appears certain that there has been no general lack of financial resources in colonial tropical Africa since World War II. The coming of independence may, however, make financing difficult in specific countries because of several factors: less assurance of steady investments from the former metropolitan power; the necessity that the African nations, therefore, may have to rely more upon their own capital; the possible inadequacy of this capital in part because the institutions for savings and investments are not well developed; and, lastly, the typical African dependence for foreign exchange on world market conditions over which the African nations, as suppliers of raw materials, have little control. It should also be emphasized that an accelerating rate of economic growth may be a political requirement in a newly independent country whose peoples have equated independence with economic advancement for themselves.

Closely related to the need for capital are two other requirements: the need for technical skills and the need to build an infra-structure. A United Nations source says, "Among the most urgent problems . . . in tropical Africa are those which relate to transport, to specific knowledge of natural resources in situations most promising for immediate development, and to training both for government service and other fields."[1] The existing prerequisites for productivity

[1] United Nations, "Economic Survey of Africa since 1950," Department of Economic and Social Affairs, New York, 1959, p. 2.

are no longer adequate for the accelerated rate of development demanded by new independent nations and economies. Thus, the African nation typically faces large investments in items such as roads, docks, transmission lines, housing, schools, and the training of peoples for a variety of tasks and responsibilities. It is also true that independence permits African leaders to negotiate loans and grants of money and of technical assistance both from the Free World and the Communist World. In attempting to profit from the rivalry, an African nation exposes itself to the danger of becoming one of the battlegrounds in the deadly conflict.

It appears that in the years ahead, only the wealth-potential inherent in the natural resources of tropical Africa can provide the financial requirements for economic development. For simplicity, the significance of these natural resources for economic development is briefly discussed here under four headings: resources of the soil, resources of the forests, mineral resources, and energy resources.

Resources of the Soil

The soil has been noted to be the basic resource of the traditional economy of tropical Africa and also of the export economy of food, beverage, and fiber crops that has been grafted onto the traditional economy. It is logical to believe that the land will continue to be basic to the total economy of the new African nations, even those which have a particularly rich endowment of mineral, forest, and energy resources. Moreover, it can be expected that the soil resource will help provide greater crop yields and indirectly more livestock with increasing inputs of mechanical energy and of technological knowledge and decreasing inputs of human labor. Thus, laborers can be released from agriculture to other enterprises, as they have been in the industrial societies elsewhere.

Nationhood and education in tropical Africa should give further impetus to the expansion of agricultural markets by helping to break down cultural differences among the citizens, including dietary differences and taboos. Thus, the food staple of a given region may find markets more widely within the nation and, ultimately, among African nations. The rice of Sierra Leone and the plantains of Uganda should be exchangeable with the yams of Nigeria and the maize of Tanganyika and the wheat of Ethiopia. The meat hunger of West Africa might be assuaged from an increased livestock economy in East Africa, and the fishing production of the Atlantic and Indian Oceans might find ready markets in the interior of the continent. Similarly, the regional specialties in oils and in fibers might be exchanged in a mutually profitable manner. The resources of the soil under enlightened stewardship might also meet some of the needs of the urban and mining areas that are now satisfied by dairy products, flour, tinned fish, meat, and vegetables and alcoholic spirits imported from Europe and America. We all recognize that such changes will not occur in isolation: they require, among other things, the development of specialization in production with attendant economies, the development of aspects of the infra-structure such as transportation and communication, and the establishment of mutual confidence among African nations. As producers of 76 per cent of the world's trade in groundnuts, 71 per cent in cocoa, 64 per cent in palm and palm kernel oil, 60 per cent in sisal (1957 figure), and significant percentages in many other items derived from the soil, the nations of tropical Africa might undertake cooperative grading and marketing procedures, research into better methods of production,

testing of new uses, and otherwise maximize their return from their export products now that this trade is theirs to regulate.

Resources of the Forest

The resources of the forests in tropical Africa are unevenly developed. Although they constitute one-fifth of the world's resources, only 6 per cent of the world's cut of "roundwood" is produced in Africa, of which 90 per cent of this is consumed for fuel. Indeed, Africa is a net importer of forest products. Forest resources have, therefore, an enormous potential for development to fill the needs of intra-African markets, particularly for construction materials. Forests yielding sawed timber are climatically limited to areas of favorable rainfall in tropical Africa, pointing to a specialization in production and the possibility that improved intra-African transportation would open up a lively trade. Those independent nations of Africa which are forest-rich might also seek a greater share in the world market for tropical woods, particularly in the form of plywoods and veneers. Then, too, cellulose is the basis for a whole army of chemical industries which transform wood pulp into more valuable materials. Like the resources of the soil, the resources of the forests lend themselves to small industries which, in time, could be built into major enterprises.

Mineral Resources

The development of the mineral resources of Africa has been almost completely the result of non-African enterprise, skill, capital, and markets. The mines and related industries are major users of African labor, sources of taxes and revenues for African governments and earners of foreign exchange. In many areas of tropical Africa, the infrastructure was built, and exists, largely to serve the mines. The mines have tended to destroy the traditional economies of Africa by substituting wages for barter and by creating communities removed from agriculture. The exploitation of mineral resources, then, has been a major, perhaps unwitting, catalyst in the emergence of African nationalism. Africa is a veritable storehouse of mineral riches, particularly of the valuable ones like diamonds, uranium, gold; the quantity ones such as copper and manganese; and the critical ones, like chrome, cobalt, and vanadium. With lesser exceptions, mining in Africa is a large scale business because of the high costs involved. The possibilities of direct sales into African markets are very limited; the markets lie across the seas with the already heavily industrialized consumers of these raw materials. It would appear logical that the independent African countries endowed with mineral resources should encourage their exploitation by the highest managerial and technical skills available so that these non-renewable assets yield wealth as abundantly as possible. Utilized mineral resources are the basic source of capital for several tropical African countries.

Energy Resources

Finally, the category of energy resources forms another potentially valuable asset in the economic development of some of the African countries. Tropical Africa, as a whole, is a large importer of fuels, particularly of petroleum products. The fossil fuel resources of Africa are low: perhaps 1 per cent of the world's probable coal resources and 2 per cent of the probable oil reserves. The reverse situation prevails in potential hydroelectric energy. There are some estimates which run as high as 40 per cent of the world's probable energy at minimum flow, of which only 1 per cent is developed. The big dam and the big generat-

ing station is a hallmark of development in tropical Africa: Owen Falls on the Victoria Nile, Kariba on the Zambezi, Edea on the Sanaga, all spring to mind. A long list of yet-to-be-builts could be cited. Valuable as these are, they are heavy consumers of capital and laggards in the development of industries based on their huge power output or expected output. The independent African nations with hydroelectric potential might well consider a number of small projects, rather than one big, although spectacular, one to stimulate the economy by the production of energy as a result of modest investment of capital and time.

The newly independent nation in tropical Africa must be concerned with both the amount and the rate of its economic growth. It must provide, or help to provide, an economic environment in which the agricultural bases will be developed to feed the rapidly increasing population arising from the high birth rate and the falling death rate; agricultural exports will earn foreign exchange; agriculture will require less labor; non-agricultural industries will require increasing numbers of employees; consumer goods demands can be increasingly satisfied from the domestic economy or from other African producers; power will be available in greater amounts; and forests and/or minerals will pay wages and taxes and earn foreign exchange in larger amounts. To keep these requirements in balance with each other is no easy task: they also must be kept in balance with the political and social types and rates of development. Thus, the government typically plays a more significant role in the economy than it does in countries whose industrial economy is mature. The government in an African country may be the largest employer of labor; it is perhaps the only significant source of capital; it may be the largest consumer of many products; it is able to make trade agreements; and it supplies the infra-structure, the social services, and the educational services upon which economic growth rests. It can plan the integrated development that an infant nation requires.

Resource Inventory

Primary to planning is an assessment of the resources available for utilization. The kind of inventories of material resources, of productive and non-productive enterprises, of transportation, communication and power, and of peoples and settlements that are so common to the field techniques of the professional geographer could provide much of these data, together with the details and the analysis of the significance of their spatial organization. When African states join in the fellowship of nations, they also join in the competition of nations. To become significant economic entities, they must plan to utilize their natural resources in the most advantageous ways, both for the immediate purpose and for the long haul. The underlying problem for them over the years will be to see that their rate of development at least keeps pace with that of the industrial nations of the world. Otherwise, the gap between them will widen and independence will have brought them not fame and prosperity, but shame and poverty. The handling of natural resources is a critical factor in initiating and sustaining the economic lives of the new nations of tropical Africa.

Plan now to attend the Forty-eighth Annual Meeting of the National Council for Geographic Education which will be held in Chicago, in 1962, at Thanksgiving time.

GEOGRAPHIC BACKGROUND TO CURRENT DEVELOPMENTS IN WEST AFRICA

ERNEST AMANO BOATENG
University College, Ghana

DURING the past few years West Africa has been the scene of rapid political changes. At the beginning of 1957, just before Ghana attained independence, the only self-governing country within this vast area of over two million square miles with a population of some sixty millions was Liberia. In 1960, less than four years later, there are twelve independent states (Fig. 1). Britain granted Sierra Leone independence early in 1961, and there are reasonable prospects that Gambia, the smallest of the British possessions, will attain its freedom as soon as satisfactory arrangements have been worked out. Only in the case of Portuguese Guinea is there some doubt about the future. Portugal has recently defined the status of this territory as that of an overseas Province of the metropolitan country and not a colony, but it is obvious from the trend of events in West Africa and the rest of the continent that this subterfuge will at best only delay the eventual grant of self-government.

Berlin Conference

In the modern history of West Africa, perhaps the closest parallel to this rapid political transformation is the succession of changes which followed the Berlin Conference of 1884-5, held at the instance of Germany and France to regulate the scramble for the African continent. Before the Conference, the political map of West Africa, from the point of view of Europe, was largely a void; yet within twenty years of its conclusion, practically the entire region, like the rest of the continent, had been partitioned among the major European powers.

The main European powers in West Africa at the time of the Berlin Conference were Britain, France, Portugal and Germany. Though they had known and traded in the region for varying periods dating from the Portuguese discoveries of the 15th century, their possessions consisted of no more than a series of toeholds scattered along the Guinea coast from Cape Blanco to the Bight of Benin. Only the coastal peoples, who acted as middlemen in the profitable slave trade of the period, were known to these Europeans. The physical and human geography of the bulk of the land beyond the littoral remained a matter of speculation, providing a fruitful field for the imagination and artistic talents of the map-makers and historians of the period, such as d'Anville and Barbot. Owing to the low elevation of West Africa, where altitudes of less than 3,000 feet above sea level are the rule, and its hot and generally humid climate, there was never any question of permanent white settlement of the type found on the high plateau elevations of Southern Africa, and East Africa. However, the abolition of the slave trade at the beginning of the 19th century, and the desire to find other sources of commerce such as rubber and palm oil, beneficial to the growing industries of Europe, led to an increased interest in the seemingly fertile lands of West Africa and intensified the rivalry among the European powers for extended territorial control.

From the Berlin Conference came the all-important stipulation that, in the future, all claims to territory in the continent must be backed by effective occupation in order to receive international recognition. This was the signal for the remarkable drive inland by the European powers from their coastal strongholds.

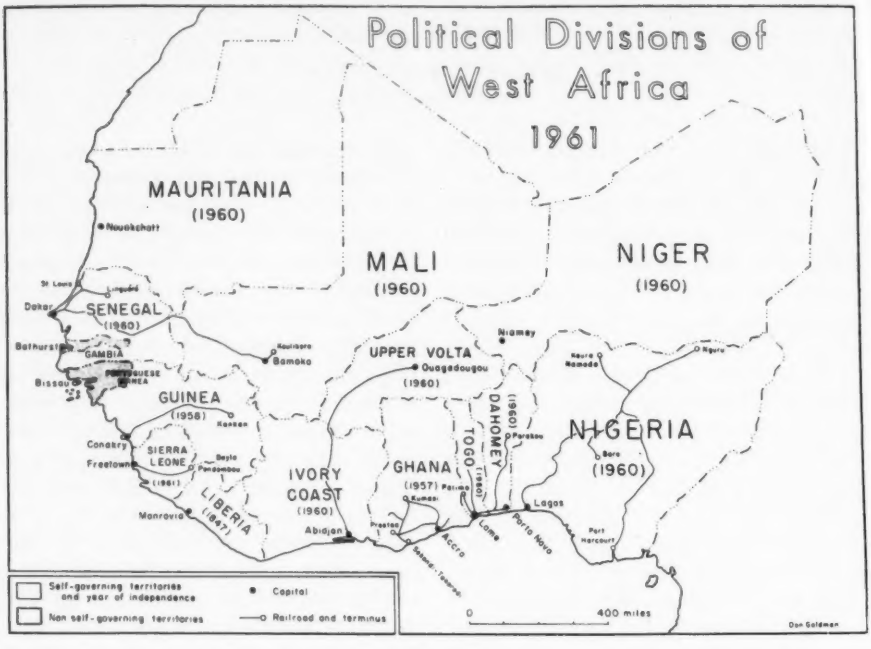


FIG. 1.

Cultures Ignored

The haste with which the partition was effected gave little time for the proper exploration of the continental interior or for the consolidation of widely-held possessions. Only the French, from their advantageous location at the mouth of the Senegal River, giving easy access along the open Sahel zone of West Africa, appear to have planned consciously for the linking of their possessions along the Guinea coast with those further north, to form a vast continental empire with its heartland in the Sudan and extending even across the Sahara to the Mediterranean coast of North Africa. The efforts made by the other powers, notably Britain, to anticipate this move merely resulted in a series of small colonies and protectorates extending varying distances inland from the Guinea coast.

It is mainly within the framework determined by the hasty territorial partition of the late 19th century that European rule in West Africa has been carried out during the past 60 years. Although this framework has provided an adequate basis for the establishment of law and order and the development of equitable trade, it has created a number of serious problems for West Africa, which we may now briefly examine.

The physical geography of West Africa, apart from landforms, expresses itself in a series of east-west zones, which Derwent Whittlesey called "the pattern of nature," ranging from coastal swamps and forests in the south to parkland and varying types of grassland into the Sahara desert. Because of the close dependence of the peoples of the region on agriculture, the same pattern is reflected in human groupings and cultural characteristics. Yet, because the scramble moved from coastal points mainly in the

south in a northward direction, the resulting pattern of political divisions which emerged after the Berlin Conference ran counter to this basic east-west trend. Also, before the European entry, large African empires had existed within the Sudan and later in the Guinea forest zone that were largely continental with a northward outlook and embraced broadly homogeneous cultures, while the new divisions imposed by Europe had coastal openings along the south and west and embraced diverse cultures having little or no inherent unity.

Moreover, partly out of ignorance but largely from considerations of self-interest, many of the boundaries drawn by Europe ignored the unity of individual tribes and peoples, and were made to follow the most obvious physical features such as rivers and mountains, regardless of their relationship to the existing cultural pattern. West Africa abounds in violations of this kind, but among the best known are the partition of the Ewes and Dagombas by the Anglo-German boundary between the Gold Coast and Togoland; of the Brongs, Sefwis and Nzimas by the boundary between the Gold Coast and French Ivory Coast; of the Wolofs by the British Gambia-French Senegal boundary; and of the Baribas by the Anglo-French boundary between Nigeria and Dahomey. Further violations occurred after the first World War as a result of the partition of the former German colonies of Togoland and Cameroons between Britain and France, thus creating problems that have already caused much bitterness among some of the new states of West Africa.

Excessive Partition

The European partition has turned West Africa into one of the most politically segmented areas of the world. Writing in 1940, Whittemore Boggs placed Africa next after Europe and South America in regard to its degree of political segmentation. At that time the French possessions in West Africa formed a single political unit. Today, with the breakup of French West Africa into eight separate states, West Africa has fifteen political divisions and a total of some 23,000 miles of international boundaries, which is far in excess of boundaries in either Europe or South America.

This segmentation has had the unexpected effect of giving the new states of West Africa a formidable voting power in the United Nations, which is proving to be a source of embarrassment to the colonial powers responsible for it; but it has complicated the difficult task of nation building in which these countries are now engaged.

Despite its recent origin, the idea of the nation-state has come to be accepted in our day as the end product of nationalism and the logical expression of political independence. It is generally recognized that a nation-state cannot exist unless four basic conditions are fulfilled: (1) there must be a sense of unity among the population; (2) there must be a territorial basis which is clearly defined from its neighbors along agreed boundaries; (3) there must be effective political organization which can count on the loyalty and support of the citizens; and (4) there must be an adequate economic basis which can ensure the continued existence of the state as a politically organized community. The fostering of a sense of unity, the political control of territory, and the effective development of economic resources—all depend to a considerable extent on the availability of a good system of transport and communications.

All the new states of West Africa aim at becoming nation-states; and yet, hardly any of them fulfills all of the above conditions. In particular, their

people lack the sense of unity which is of such vital importance. This difficulty arises from the large number of tribal, ethnic, and linguistic divisions within their boundaries. Before the advent of the European rule, these divisions frequently coincided with autonomous political groupings; and although the imposition of colonial rule placed such divisions within single territorial units, little was done to foster a sense of unity among them. In French West Africa, the policy of centralization tended to reduce the significance of these "native states" without effectively substituting a more comprehensive patriotism, while in the British territories, the policy of indirect rule based on the recognition of tribal chiefs for purposes of local government, despite all its sociological and psychological advantages, tended to perpetuate tribal divisions. Thus, in Ghana today, there are still some 108 traditional states ruled by chiefs which figure prominently in local government; and it is estimated that there are about 65 different languages and dialects in the country.

As a result of this situation, the development of national unity has always been one of the first tasks to which the new states of West Africa have turned their attention. But in their anxiety to achieve speedy results, the governments concerned have employed methods that have sometimes involved interference with fundamental freedoms. Also, excessive preoccupation with their political sovereignty and distinctiveness has frequently resulted in a further sharpening of the artificial divisions between different states, which all are unanimous in condemning as the work of foreign imperialism.

Resource Development

The second major problem which faces the new states of West Africa is the effective development of their economic resources. In the past, there has been excessive concentration on the production of raw materials for export, mainly to the metropolitan countries, in exchange for manufactured goods. Owing to the wide sources from which the metropolitan countries could draw their primary produce, it was often a deliberate policy, especially in the French areas, to encourage or require each colonial possession to specialize in certain products. Thus, even the primary production undertaken in these dependent territories was very unbalanced.

There is a strong desire among the newly independent states of West Africa to achieve more balanced economies in which primary production is combined with a reasonable degree of industrialization. Although such developments are generally recognized as essential for the raising of living standards, the fact must be faced that not all of these countries can hope to achieve the same degree of success since their natural and human resources show wide variations.

The most obvious contrast is that between the better-watered Guinea lands within the rain forest and southern savanna zones and the dry Sudanese lands in the northern savanna, Sahel and Saharan zones. Except for Senegal, which has the advantage of a coastal location, the Sudanese countries are poorly served with communications and marked by feeble economies in which mining hardly figures at all. On the other hand, the Guinea lands have relatively good communications, and produce a wide range of both crops and minerals for export. It is known that some of the Sudanese and Saharan lands, such as Mauritania, have valuable mineral deposits, and there is little doubt that further exploration would disclose more wealth, but their inland location has hindered the construction of roads and railways which, because of the limited role which rivers and other forms of transport can play, are such powerful instruments for

economic development throughout Africa.

While the French West African Federation lasted, however, it was possible for these remote and poor countries—all of which formed part of it—to receive assistance from their more fortunate neighbors and from France itself. But the recent breakup of the Federation has suddenly thrown them back on their own limited resources. Aware of the dangers of isolation and the critical importance of ocean outlets, all these countries, namely Mauritania, Sudan, Upper Volta, and Niger, have tried in various ways during the past few years to work out alliances with their neighbors. But in many cases, deep-seated differences and hostilities have undermined the success of these attempts at co-operation.

If it is difficult for the French parts to co-operate, it is even more difficult for areas which have been ruled by different European powers to work together, owing to the wide cultural differences between them and the disruptive effects of past policies. Areas that plainly should form a single economic unit have been separated from one another by political boundaries, and communications which might link them have been made to stop short at all but a few selected points along these boundaries.

Examples of this are easy to cite. Senegal is denied the use of its most natural outlet, the Gambia River, which flows through the middle of the country, because the narrow British colony of Gambia occupies the lower section of this river all the way from the sea to the limit of navigation, 290 miles inland. Further south, the potentially rich southeastern part of Guinea is cut off from the sea by Sierra Leone and Liberia. Consequently, instead of seeking its outlets to the sea through these territories, it employs the more roundabout route within its own boundaries to the Guinea port of Conakry. Along the Ghana-Ivory Coast boundary roads have either not been carried across the boundary, or else have been kept in such a state of disrepair as to discourage intercourse. Further east, French Niger, which borders Nigeria along the north and suffers from remoteness, finds it preferable to use the rather lengthy and unsatisfactory road and rail connection through Dahomey to the port of Cotonou, instead of taking advantage of the more direct route along the Kano-Lagos railway in Nigeria.

For all parts of West Africa, but especially for the Sudanese section, the problem of conquering the physical environment and mobilizing human resources in order to achieve improved agricultural production is very considerable. And yet, as the experience of Ghana since its independence shows, unless agriculture and other primary production can be put on a really sound basis, there is little hope of achieving even the limited degree of industrialization required to raise the low living standards of the people. Efficient farming techniques, an increase in agricultural productivity, the provision of good transport and communications, and more and better education, form the necessary basis or infrastructure for further economic development.

The withdrawal of Europe from political control of West Africa will not automatically solve these problems. Indeed, there is the danger that many of them will become more serious, owing to the multiplicity of nations and nationalisms produced by this withdrawal. Yet, the more the geography of the region is studied, the more obvious it becomes that its limited material and human resources cannot be properly developed unless there is closer co-operation and consultation among its various parts. During the European period, one had to look outside of West Africa to grasp the logic of economic development. Today, the new states of West Africa, while not

losing sight of their relations with the rest of the world, must seek to develop an outlook that is directed inward to the region itself. Otherwise, it will be difficult for them to strengthen the economic foundations of the political freedom they have won.

HIGH SCHOOL GEOGRAPHY TEXTBOOKS (1918-1941) AND THEIR RELATIONSHIP TO CLASSROOM INSTRUCTION

HERBERT L. ZOBEL
Eastern Michigan University

THE geography textbook has evolved through many stages of development, but its importance to the high school teacher has always been great. Many changes have taken place in the preparation of teachers in the United States since the opening of the first normal schools more than a century ago. Colleges and universities have changed their teacher education programs as well. One thing which has not changed very much during this time is the classroom teacher's dependence on textbooks, teachers' manuals, and other instructional materials. This dependence has been increasing because of the complex and specialized nature of geographic subject matter which constitutes the modern high school curriculum.

Stages of Textbook Development

A brief survey of the period prior to 1918, the era between the two World Wars, and developments since 1941 illustrates the importance of the geography textbook. Prior to 1918 the high schools (grades nine through twelve) were enrolling an increasing number of pupils, although this group was not as large as the one in the elementary grades (one through eight). Many teachers during this period had only a high school education, or perhaps a year or two at a normal school. Some teachers were exceptionally well qualified because of their attendance and graduation from a college or university. However, the preparation of geography teachers in this period presented most of the problems faced by geographic educators today, for example: (1) what is to be taught at a particular grade level, (2) which approach or philosophy should be followed, (3) where can the necessary information be obtained, (4) how does the classroom teacher evaluate the results? The teacher of geography then, as now, frequently turned to a textbook for guidance and trusted in the authority of the authors and editors who provided this essential classroom aid.

The dependence on textbooks by high school teachers of geography between the two World Wars did not lessen. It probably increased because a large number of Americans had seen new lands and peoples, and the growth of industrialism had fostered increased foreign trade. These changes expanded geographic horizons and made new demands on the teachers of geography. It will be shown later how textbooks attempted to supply the needs of teachers faced with changing world conditions following the declaration of peace in 1918.

World War II brought geographic concepts into use on an extensive basis during the hostilities, and to an even greater degree afterwards. The concept of the shrinking world and a new attitude concerning international responsibility fostered the founding of the United Nations. Geographic information multiplied at a very rapid rate, and new philosophies were proposed for teaching this core subject in the high schools. The cur-

riculum continued to be expanded, and teachers were expected to keep up with a rapidly changing world. Geography became a difficult subject to teach because of the expanded horizons of a shrinking world. The teachers turned once more to geography textbooks and teaching aids which had been prepared by experts and specialists in this vital area of instruction. The quality of the aforementioned materials has improved steadily, but this is no substitute for a thoroughly prepared teacher of geography. The preparation of geography teachers is not a consideration here except as it relates to the textbooks used in high school classrooms.

Four Periods of Content Development

The outlooks presented in high school geography textbooks can be identified in at least four periods. The first one included high schools of the nineteenth century which did not have large enrollments. However, the later elementary grades (seventh and eighth) which are now a part of junior high school were presenting geographic subject matter to large numbers of pupils in the public schools. In 1889 two noted American educators, W. T. Harris and Francis W. Parker, issued a plea for a change in the teaching of geography.[1] They complained that geography should not be a memorization of isolated facts, but a dynamic study of the earth and mankind as they are related in everyday life. Parker outlined his new program in a book *How To Study Geography* which deserves attention today because it marks a transition from the country–place–product geography to the "new" geography which emphasized the physical environment.

The second period began with the new emphasis on physical geography and a dominance of textbooks revealing this viewpoint. Although this emphasis was continued through the use of these textbooks into the 1930's and later, new physical geographies copywrited after 1918 are few in number. The two examined for this report are widely separated in time of publication,[2] and only a few have been published since World War II.

The third period, from 1918 to 1941, was dominated by textbooks in the commerical–economic–industrial category. World geographies began to reach the high school classroom although primarily at the junior high level. It was during this time that the junior high concept became established and it was here that many pupils received their terminal instruction in geography. "By 1918 the Bureau of Education estimated 557 junior high schools with over 116,000 students in the United States, and the rate of increase at that time was rapidly accelerating."[3] The importance of geography in the high school curriculum was recognized in some communities (*i.e.* Joliet, Illinois), but frequently the offerings disappeared with the demise of physiography. Sometimes geography survived in the high school but only in the business studies department where it was considered in a very narrow and specialized context. The dependence on textbooks during this period was just as great, if not greater, than it always had been.

The entry of the United States into World War II marks the beginning of the fourth period in the development of geography textbooks for high school use. Many new ideas have entered the classroom via the geography textbooks published since World War II. Excellent instructional materials both verbal and vis-

[1] Francis W. Parker, *How To Study Geography*, D. Appleton and Company, New York, 1894.

[2] R. D. Salisbury, H. H. Barrows, and W. S. Tower, *The Elements of Geography*, Henry Holt and Company, New York, 1923. Vernor C. Finch, G. T. Trewartha, and M. H. Shearer, *The Earth And Its Resources*, McGraw-Hill Book Company, Inc., New York, 1941.

[3] R. Freeman Butts and L. A. Cremin, *A History of Education in American Culture*, Henry Holt and Company, New York, 1953, p. 421.

ual, teachers' manuals, tests for evaluation of progress, and other resource materials have come to the aid of geography teachers. However, it is still true today that many high school geography teachers are inadequately prepared to utilize these excellent materials. This is another question which needs further exploration.

It may be observed in the four periods outlined that textbooks had a basic influence on what was taught. It is acknowledged that textbooks are published in response to a market demand, but this fact should reflect clearly the changing emphasis of geography in the high schools of the United States. Throughout the history of teaching geography some degree of dependence on textbooks has continued; and the use of audio-visual materials, and more recently television and other techniques, has not altered this fact appreciably.

Textbooks in 1918

The high school geography textbooks available in 1918 can be summarized as follows: Physical—13, Commerical—11, General—3.[4] It is not within the scope of this study to examine the characteristics of geography textbooks prior to 1918, but it may be assumed that the books in the 1918 summary were used in grades seven through twelve. The growth of the junior high school movement necessitated a new kind of geography textbook which was not "elementary." Today, pupils frequently object to materials for instruction which they feel are too elementary although this was not a serious problem in 1918. The geography textbook writers from 1918 through 1941 carefully explained the new philosophy for teaching geography, usually in a "Preface to the Teacher." The pupils were expected to study geography in order to answer questions and to solve problems concerning their country and the world. Facts were presented in the textbooks not for their own sake, but as a means for answering questions which were placed in the books at frequent intervals. Problems and questions for discussion were given also to stimulate geographic thinking, and supplementary reading lists were sometimes provided for teachers as well as the students.

Textbooks 1918-1941

A total of twenty textbooks for the period 1918-1941 were examined. The availability of these books limited a complete treatment of this subject, although those examined probably constitute a representative sampling.[5] Prior to 1918 the physical geographies had constituted the largest group of textbooks and numbered thirteen although commercial geographies were very close with a total of eleven; however, general geographies numbered only three at the time of the 1918 survey. It is a fact that many physical geographies continued in use after 1918 although only two used in the present sampling appeared, *Elements* and *The Earth And Its Resources*. Both of the aforementioned texts related man to the resources and the physical environment, however, and were not limited to physiography and natural resources alone. These two books are classified physical because that is the primary emphasis, and both were written for use in grades nine through twelve.

Two books which are commercial-economic in content have a strong physical theme which makes strict classification difficult.[6] These were prepared for grades

[4] "Directory: High School Textbooks," The Journal of Geography, 16 (June, 1918), p. 369.

[5] Books were obtained from the following sources: Eastern Michigan University Library, University of Michigan Library, Department of Geography—E. M. U. and U. of M., private libraries of Miss Margaret Sill and H. L. Zobel.

[6] James F. Chamberlin, *Geography: Physical, Economic, Regional*, J. B. Lippincott Company, Philadelphia, 1921. Leonard O. Packard, C. P. Sinnott, and B. Overton, *The Nations Today: A Physical, Industrial, and Commercial Geography*, The Macmillan Company, New York, 1939.

nine through twelve and widely separated with respect to time of publication. The primary focus is on the United States and its international relations.

Four world regional geographies are included in the present sampling.[7] All of these textbooks could be considered junior high level or below and for use in grades six through eight. The new emphasis on social studies with history and geography combined to study mankind is evident already in these books. The decline of physical geography was taking place during this time while another philosophy began to dominate geography textbooks.

Eleven textbooks or more than one-half the present sample could be classified as commercial, industrial, or economic.[8] The major emphasis in teaching and in the textbooks published between the two World Wars is revealed in this fact. A wide range of needs in junior and senior high grades were met by these texts, but the physical and world regional outlook was secondary and in some books almost lacking. World War I had turned the attention of the United States on the rest of the world for a short time, but after this episode geography textbooks seldom acknowledged the impact of this major conflict in specific terms of a revised curriculum for geographic instruction in the high schools. The last book in the sample is not a textbook by strict definition, but a helpful manual for students in seventh and eighth grades.[9] The essentials contained reveal the geographic emphasis at the time of publication and the kind of questions which were asked of geography students.

Post-World War II Textbooks

An examination of geography textbooks in the post-World War II period reveals a much different attitude. The teaching of geography is expanding in our high schools today, and geography textbooks focus on the relationship of the United States with the entire world. World geography is becoming the focal point in the high school curriculum in many cities. Recent articles appearing in THE JOURNAL OF GEOGRAPHY (*i.e.*, April, 1961) support this conclusion by outlining the progress being made in cities such as Chicago and Joliet, Illinois.

The study of geography in high schools between the two World Wars has been viewed through a sampling of textbooks which were published during this period. It is likely that the teacher relied upon these textbooks for guidance as to what should be taught depending on the degree of preparation in geography possessed. Therefore, many insights can be

[7] J. Russell Smith, *Human Geography: Book Two—Regions and Trade*, The John C. Winston Company, Philadelphia, 1924. Frank M. McMurray and A. E. Parkins, *Advanced Geography*, The Macmillan Company, New York, 1924. Harlan H. Barrows, Edith P. Parker, and M. T. Parker, *Countries throughout the World*, Silver Burdett Company, New York, 1938. Wallace W. Atwood and H. G. Thomas, *The Earth and Its People: Higher Book*, Ginn and Company, Boston, 1930.

[8] J. Russell Smith, *Commerce and Industry*, Henry Holt and Company, New York, 1920. Ellsworth Huntington and F. E. Williams, *Business Geography*, John Wiley and Sons, Inc., New York, 1922. R. H. Whitbeck, *Industrial Geography: Production, Manufacture, Commerce*, American Book Company, New York, 1931. Wallace W. Atwood, *The World at Work*, Ginn and Company, Boston, 1931. Charles C. Colby and Alice Foster, *Economic Geography for Secondary Schools*, Ginn and Company, Boston, 1931. Fred K. Branom and H. M. Ganey, *Geography of Our World*, William H. Sadlier, Inc., New York, 1935. Eugene Van Cleef, *This Business World: An Economic and Commercial Geography*, Allyn and Bacon, Boston, 1937. R. H. Whitbeck, Loyal Durand Jr., and J. R. Whitaker, *The Working World: An Economic Geography*, American Book Company, New York, 1937. Earl C. Case and D. R. Bergsmark, *Modern World Geography: Economic and Social*, J. B. Lippincott Company, Chicago, 1938. Maude C. Martin and C. E. Cooper, *The United States at Work*, D. C. Heath and Company, New York, 1938. J. Russell Smith, *Our Industrial World*, The John C. Winston Company, Philadelphia, 1939.

[9] Rose M. Murphy, *Geography Essentials*, Globe Book Company, New York, 1935.

obtained about the content of high school geography courses by a study of such textbooks.

Conclusions

There are several conclusions which might be made on the basis of this brief survey. First, the changing emphasis reflected in geography textbooks at different times did not alter the nature of the subject. However, the textbooks did affect what was taught in the high schools at any given time. This means that both teachers and pupils may become confused about the real meaning of geographic education, and this confusion may become compounded in the public's mind.

A second consideration pertains to the trend towards increasing specialization in all areas of knowledge. If the textbook and its adjuncts remain at the core of geographic education in the high school, as it must until there is an adequate number of qualified geography teachers, who will be responsible for preparing these aids? There are programs for specialization in almost every phase of geography at the highest levels, except for those who are concerned with the quality of teaching and the materials of instruction used in the elementary and secondary schools of the United States. There are a few oases at which a geographer concerned with this specialty may find succor, but there are not enough to supply the increasing demand of those whose responsibility it will be to prepare teachers of geography for the public schools.

Finally, we must ask the question: How good are the materials available to the high school teacher of geography? The answer is encouraging because of organizations which promote research and publication for interested teachers. Examples of such groups are the National Council for Geographic Education and the National Council for the Social Studies. Textbook publishers employ geography editors, and resource persons back up the sales personnel of many large firms. Expert geographers prepare texts and teaching guides, and as in the past they have teaching experience and/or the advice of teachers at the appropriate grade level. Supplementary materials of excellent quality are widely available; but, the major problem is bringing the geography teacher into contact with the wealth of material. This should be an important function of every professional geographer.

THE AREAL ANALYSIS: A SECOND STEP TOWARD CRITICAL THINKING IN HIGH SCHOOL GEOGRAPHY

WILBUR J. SWITZER
Los Altos High School, La Puente, California

A COMMON CRITICISM of secondary education in the United States is students are not being taught to think critically. The degree of truth in this criticism may vary from school district to school district and from state to state; yet we as teachers should be more than alarmed that there is any degree of truth in this criticism at all.

Teachers, those who are professionally trained and qualified, are aware that they have a tremendous stake in molding the future course of the nation; teachers have a direct hand in the destiny of the world's civilizations.

Possibly the most important task a teacher has is to ready young minds to be able to grasp and deal effectively with the problems that confront mankind. There is no substitute for the ability to think critically; the fate of the earth's people may well depend upon the ability of citi-

zens to think in a clear, rational manner. The ability to think in a clear, logical, and concise manner should be a prime goal of education at every grade level.

Each discipline, be it the sciences, the social sciences, or any of the others, has developed a system of thought processes peculiar to its own needs. Though each of these systems may vary in the method of analysis, their end is always the same.

A course in world geography may accomplish the goal of teaching students to think critically in a number of ways. Instructors in the social sciences at Los Altos High School, La Puente, California, agree that the areal analysis approach is one of the most effective methods we have used thus far.

The Method

The areal analysis method, for the freshman level in high school, is a system of collecting, organizing, and evaluating data in a geographic way. Our basic concern is to show the spatial relationships that exist between the various patterns of geographic elements. Thus we begin with an analysis of the local community and work toward broad regional studies, always using the same basic approach. The system is constantly improved and refined as the classes progress through the year. An areal analysis system may be tailored to suit the individual class need at any level of junior or senior high school geography.

Currently our areal analysis system is divided into the following broad categories: extent of the area; population; broad physical patterns; focal points of human activity and channels of traffic; pattern of agriculture; pattern of mineral extraction; pattern of industry; historical highlights; problems; outlook.

Each of the major divisions is broken down into an unlimited number of subtitles. This depends upon the individual class. For example, in the consideration of population the instructor may include such things as total number, density distribution, ethnic numbers and distribution, and pattern of settlement. Generally speaking, with slower classes one considers a few basic items; more alert groups may go into as much detail as their instructor has resources to provide.

The success of the areal analysis system is in part due to the approach that is taken when considering the major divisions. Experience has shown us that the use of description, explanation, and significance, in that order, is most effective. For example, each major division may be mapped. (The selection of map assignments depends upon the instructor). The map pattern or patterns, as the case may be, are then described, explained and their significance pointed out. This may be a written exercise or a class developmental discussion exercise. Care must be taken by the instructor to guide the class along the lines of the most important relationships in the early part of the year, but as the semester wears on this will become a set part of class routine. The level of each group must be given careful consideration as to what may be expected from it; yet even slow students soon find a satisfaction and challenge in pointing out basic generalizations from well-constructed maps.

It might be well to mention that the instructor may grade the quality and quantity of the maps, the quality of descriptive, explanative, and significant exercises (oral or written), and the quality and quantity of basic relationships a student may develop. The growth of a student may easily be ascertained from exercises of this type.

A system of this kind may be used on small units for great detail or for large units in which there is only time for limited inspection. Experience has shown, however, that instructors seem to be able to cover larger areas in much more detail and less time than has been done by just selecting political units.

A system of areal analysis gives a broad leeway to the preparation of the individual instructor. Interests may be concentrated in any division of the field that the instructor feels amply important or better qualified to teach: yet the basic system and broad generalizations are fairly uniform.

It should be pointed out that using a basic approach of this kind has lessened the difficulty of students transferring from class to class. Even though a class may not be considering the same area or region, a student who is familiar with the system of instruction has much less difficulty adjusting to a new class.

A system of areal analysis has a number of strong points. It appeals to all groups of students by using a wide range of sensory action. It develops a systematic approach to collecting, organizing, and evaluating data. It provides flexibility in approach and visible satisfaction to most grade levels; it is relatively easy to grade and student progress is easily discernable. The system provides a uniform approach without thwarting the initiative of the individual instructor; moreover, it lessens the problem of student adjustment in inter-class transfers. More important, however, the areal analysis develops within a student the ability to think critically at a level and in a way he can see and understand.

GEOGRAPHY AND GENERAL EDUCATION

ROBERT H. FUSON
University of South Florida

MOST geographers are unable to correctly define the term *general education;* many cannot define *geography*. This paper concerns both as they are today and as they might be.

For many years geographers have debated the multiple facets of our discipline. No stronger arguments have found their way into print and to the rostrums of geographic meetings than those centering around approach and methodology. Many have been seeking a definition, and there are almost as many definitions as there are seekers. Geography has been called an art, a science, a synthetic subject, an analytic discipline, and among other things, the bridge between physical and social science. But while we engage in polemics a nationwide shift in the educational wind is occurring. This light breeze—fragrant to some, ominous to others—might well become the whirlwind that will carry large chunks of geography into oblivion. Or, it may be the fresh zephyr that restores life.

The reader may ask with alarm, "Restores the life of what?" And I proffer that a major portion of traditional geography—regional geography—is either already dead or traveling the path to extinction. Perhaps the drift in that direction is barely discernible; perhaps it eludes detection. But it is there, and it is real, and the changing currents are rustling through traditional curricula other than geography. History and anthropology either are now or soon will be the uncomfortable bedfellows of geography, for they, too, have a vested interest in regionalism. In a sense this is to say that these three fields have a vested interest in *general education.*

General Education

General education is *general* in that it is for everyone. It is not vocationally oriented, but, rather, is woven of the stuff all educated persons should wear. General education requires a high order of synthesis and integration of varied materials. Is not this the same claim many of us have made for regional geography (and

regional history and anthropology)? Geographical regionists see themselves as masters of synthesis, but how many have acquainted themselves with the synthetic techniques employed by our liberal arts colleagues in history and anthropology? Are any historians or anthropologists doing a better job at regional synthesis than we are? You may think not, but are you honestly certain that this is not precisely the case in numerous instances? The geographer may know more about a region's climate or soils than an anthropologist, but we may all agree that typically we comprehend far less about native peoples and their cultures than the anthropologists. Take for example, the student who seeks information about the troubled land of Negro Africa. Assuming equal competence, who would offer more, a geographer or an anthropologist? It depends, you say, and you are correct. If one of our geographers had lived in the area for fifteen years, he most likely would have absorbed enough of the other's field to give him the edge. As a geographer reading these lines, can you admit that an anthropologist who has lived and worked for fifteen years in Africa might teach a better regional course of the area than a geographer who has never been east of Kansas City? Now what if our anthropologist had a minor in geography? Will you admit that an historian, strongly reinforced with geography and anthropology, might be just as competent? Or should the geographer learn history? Does our ego centrism permit only historical geography and no geographical history?

Difficult though it may be, we must admit that *in some instances* other regionalists can synthesize as well as we. A number of them may be more skilled at the task. By making such an allowance we may do more to help geography than to harm it, and we may save regional studies before they are put to sleep once and for all. The breath of life for those regional geography courses that have already passed on in some institutions may be restored, but only through general education.

Regional Geography

Geographers, as well as historians and anthropologists, claim that every student should be exposed to his subject. We also recognize that most enrollees in regional courses are not majors, or in other words, regional courses are largely non-vocational. This is in essence a re-definition of general education. In fact, geography and history are quite probably the original general education courses. Now this fact is highly significant for geography and history, and to a lesser extent for anthropology. Our diverse and collective regional offerings have long recognized the value of drawing from many disciplines, molding the parts into a whole, and discovering meaningful phenomenal patterns and their interrelationships. The value of such is quite clearly valid and is by no means a collection of generalities. True, some regional surveys are woefully superficial, as are certain analytic courses in social science and other curricula. But no one can call superficial the regional work of de la Blache, Galois, Demangeon, Blanchard, Sion, Vallaux, Levainville, and Gradmann, to name only a few. Then why is regional geography so often condemned, and why do I suggest that it may be swept away by the evolving philosophy of general education? If we accept the fact that a good regional study *is* general education at its very best then we have forced a dilemma upon ourselves. We are saying that general education can logically destroy itself! Regretably, this can happen *if* geographers fail to grasp what general education is and *if* general educationists ignore one of the best developed integrated subjects in the American university.

Departmentalization and Duplication

Let us ask ourselves another question. "What should a student get out of a re-

gional course?" If the reader will make a quick mental list of the items, he may immediately note many that lie outside the bounds of geography. It will depend on the instructor how far afield they lie. Granting that regional geography touches upon an assortment of facts, we can assume that a student enrolling in *Latin American Geography* will get some exposure to non-geographical materials. The instructor should relate man and the land from time to time in order to keep a clear conscience. If our student is seriously interested in Latin America, he will probably take a course in that area taught by an anthropologist. Here he will get more specific data relative to the peoples of the region, but he will be treated to additional information concerning man's use of the land—plant and animal domestication, farming, hunting, gathering, settling, burning, and migrating. The anthropologist simply cannot ignore the natural environment anymore than the geographer can overlook man. And the anthropologist must cross into historical time on occasion. So our student enters a course titled *History of Latin America* the next semester. The historian will draw from many of the same sources used by the previous teachers. Normally he will spend a block of time surveying the natural landscape, will deal with the pre-Columbian population and their culture, and will introduce maps and place names. He cannot teach history without bringing in such factors as social and political institutions, economics, and settlement and colonization. In all three regional courses the student will find a sprinkling of sociology, economics, political science, psychology, and the humanities, plus occasional bits from the natural sciences.

The above example is not extreme or contrived. The same regional integration may be done in several other disciplines, such as geology, foreign languages, and business administration. Every individual instructor, regardless of his subject-matter orientation, feels a compulsion to "cover the field"; he strives earnestly in his particular course to provide *general education* for his students. Many teachers will privately admit that they range over such a large portion of the liberal arts curriculum because they fear the student will have only the one course, and should get as much as possible in the limited time allotted. For the student who takes several courses in the same area, there is a fantastic amount of overlap and frequently there is contradiction of supposed facts. When asked about the overlap, the instructors argue that repetition is really good, for a person tends to learn better that way. When queried as to how the student is supposed to correlate the multitudinous assortment, the teachers respond with a too-oft-heard stock reply, *it will come to him!* Are we saying that our university professors cannot integrate and relate diverse disciplines and make them meaningful, but that our undergraduates can? This is utterly preposterous and even paradoxical, for within the classrooms the same professors feel that they are indeed tying up all the loose ends in a particular region!

From Theory to Reality

Permit me to state precisely how geography can contribute to the general education regional course, and how it may filter into traditionally non-geographic realms. Further, there is the question of what general education can do for geography. Perhaps it is best to examine the curriculum of the University of South Florida, for at that institution theory has become reality. What has been done at South Florida has not been revolutionary, but, rather, it represents an evolution in the thinking of many faculty members. Long before joining the South Florida faculty, the writer had become discouraged with traditional regional geography. Several members of the social science curriculum committee were also

ready to depart from certain established norms. Operating in this atmosphere of a desire to improve education, or at least attempt to improve it, the curriculum group came forth with a simple and fundamental criterion for course creation: what will a student need when he leaves the University? At first, most committee members felt that students needed what the teachers wanted to teach! But unlimited debate finally produced a realization that there was really little correlation between student needs and professorial preferences. Geographers were at once faced with the very obvious question: *which* region should be offered, if only one could be? Mutual agreement was reached that Latin America would receive top priority, and for many valid reasons: Tampa is close to the area, it is teeming with Cuban refugees at the moment, more than 50,000 Tampans speak Spanish, a large portion of the student body are of Latin heritage, and the United States government is taking a renewed interest in the area. Then the question arises: if the student takes no more than 6 semester hours, should it be in geography, history, anthropology, sociology, political science, or in some other discipline? It was felt that a student in the 1960's should know Latin America as a whole, for people live in the inextricable web of culture and nature. An understanding of man on the land—regional geography in the truest sense! Yet, such a course might also be regional sociology at its best, or regional history, if synthesis can approximate totality. No faculty member could dispute the merits of a course which contained a normal complement of disciplinary material.

Once it was decided to offer *Latin America,* every Latin Americanist on campus was called upon for advice in constructing the course. This was to insure synthesis. Each saw that particular disciplinary matters went into the outline. Each devised a reading list, which could include 10 or 12 texts, located in the reserve room of the library, or available in paperback editions. The best rounded man was chosen to teach the offering, but he must maintain close lines of communication with allied interests. The result is not at all unlike many excellent regional geography courses taught across the land. The only difference is that formal attention is given to non-geographic subjects that are to be woven into the pattern. Geography content is not weakened simply because related matter is strengthened. If anything the relationships appear more clearly and geography's cause is furthered.

A second regional course was established at South Florida to treat of the exploding and troubled Afro-Asian world. Again, geography is a prime, if not the central, part. It so happens, however, that the best African geographer on the campus is an anthropologist, who has lived and worked in Africa. There is no reason to suspect that geography will be ignored.

A Concept Spreads

As these curriculum discussions proceeded, non-geographers on the committee began to see how geography could and should contribute to courses normally taught outside the geography sphere. Turning again to student needs, *Modern Colonialism* and *Communism in the Modern World* were created. In one sense these are regional offerings, for the areas may be delimited. Geography shared in the outlining of each and they have emerged as excellent examples of social science integration: geography, anthropology, history, political science, sociology, economics, and psychology intermeshed. At worst each discipline has sacrificed a little of its empire to provide the student with a basic knowledge for living on a confused earth; at best the student will come through with an understanding of interrelationships that

could never have been obtained from fragmentary offerings—some of which he does not have time to take.

Such an interest in geography was aroused on the South Florida campus that our discipline has become an important segment of several non-regional and normally non-geographic offerings. The course in *Human Behavior,* originally organized as an amalgamation of psychology, sociology, anthropology, and logic, now includes geography. Language courses use maps and geographic literature in the native tongue. At least two courses in natural science were designed with a geographer participating.

The critic may still say that *some* of these courses may be taught by a non-geographer. A possible rejoinder might be that some non-geographic courses are taught by geographers. But is it not more significant to note that geography has found its way into dozens of courses where it is not usually encountered? And that in every case geographers have helped to mold the course and select certain readings? Are many other universities apt to require enrollees in the English Department to read a geography work? And do many geographers participate in panel discussions before language and literature classes as at South Florida? Quite frankly, geography has gained immensely because it was determined not to struggle to the death for a large regional empire. If anything it pioneered in the integrated approach, for certainly geographers know the true meaning of regional synthesis.

A True Social Science Course

The integrated social science course must not carry a departmental prefix. As a *social science* course it may be permitted to serve as part of any major that deems it worthy. Course content and instruction will determine this, and normally several departments will allow credit for any given offering. By removing the regional course from the department we open the door to the most qualified teacher on the faculty. It is hoped that geographers will continue to lead the way, but it will be their fault if other regionalists come to the teaching ranks with better preparation.

Dollars and Sense Via General Education

The general education regional course is economical, practical, and intellectually stimulating. It is economical in the sense that undue course proliferation is removed from the catalog. With integration regional courses can provide more material with fewer classes than is possible now with area courses scattered throughout the curriculum. Fewer instructors and classrooms are needed. Teaching aids, such as maps and slide projectors, need not be duplicated at an awesome rate. Budget-minded controlling bodies would not be displeased at this particular time when enrollments are outstripping physical facilities. And faculty members anxiously awaiting salary increases might come closer to that day if sufficient money is saved. The integrated course is practical in that the best man can teach it, for general education helps tear down antiquated departmental fences. It is an intellectually stimulating venture that challenges the instructor. He can roam across disciplinary boundaries with freedom, and without fear of treading on traditional toes. And the student is not forced into selecting a few dishes from the academic cafeteria; he can get a complete, well-balanced diet. There is an immediate departmental gain that results from the establishment of an interdisciplinary regional course. Relieved of a part of the regional burden the several cooperating disciplines can turn their attention to systematic work. Perhaps room for as many as five additional courses of a systematic nature may become available. Geographers can pay more heed to the

atmosphere, soils, biogeography, settlement, and cultural elements. History might well be forced into such refreshing courses as *Revolution, Human Bondage, The American Frontier, The English-Speaking Peoples, Democracy, Totalitarianism, Technology,* and others.

Looking Ahead

At the risk of being prophetic, I see a time when general education will be the guiding philosophy at most American colleges and universities. The fragmentation and specialization of knowledge has reached a point where a student cannot even think of enrolling in all courses in a given department during his four undergraduate years. It is usually impossible to take every course in a single department even if the student continues for the doctorate. Vital information is divided into hundreds and sometimes *thousands* of course offerings in larger institutions. Only general education can pull the more essential materials together for every student to experience. Regional courses will be compelled to combine, if for no other reason than financial limitations. Geographers can note this trend now, as they have done at South Florida, and lead the way in establishing integrated social science area courses, or they can relinquish control to some other regionalist. There is another alternative: regional courses may be dropped altogether as they have been at some of our major schools. On the other hand, active participation by geographers in area studies can help enlighten faculty colleagues as to just what modern geography is. Not only will systematic studies benefit but good regional programs may well supply the majors necessary to permit a vital geography program in its own right.

But above all else we must continually ask, "What is best for the student?" I cannot help but believe that student needs have changed during the past 25 years, yet I fail to recognize any change in regional methodology. We must discover these new needs and adjust to them and to the new generation of young men and women. In essence, we must define our goals.

RESOURCES, ECONOMY AND CONSERVATION

WILLIAM GOODWIN
The University of Wisconsin—Milwaukee

THE GREAT importance of an abundant and varied resource endowment to the growth of a national economy has, of course, been stated and restated many times, as has the role of conservation in the use of these resources. Yet, frequently because of the excessive verbiage and the high emotional content of much discussion, it is difficult to maintain a rational viewpoint. The relation between human wants and the satisfaction of those wants, the allocation of the scant means in relation to given ends, is often obscured.

Production is presumably undertaken for the satisfaction of human wants. The classical economist labeled the agents of production as Land, Labor, Capital, and sometimes set Organization as a fourth agent.[1] The term Land meant the materials and forces of nature; Labor referred to the economic work of man; and Capital meant knowledge, know-how, and equipment as well as the tokens of exchange. Although these terms are time-honored, there is some justification for using a slightly different terminology:

[1] Alfred Marshall, *Principles of Economics,* 8th edition, MacMillan and Co., London, 1947, Bk. IV, Ch. 1, Sec. 1.

Natural Resources, Human Resources, and Cultural Resources. This shift in terminology is particularly useful if the concept of a resource advanced by Zimmermann and others[2] is kept in mind. Something becomes a resource when it is appraised by man as useful; until such a subjective judgment is made, "something" is not a resource. The resource terminology is a more dynamic one than the static Land, Labor, and Capital.

If conservation of resources can be identified as a conscious effort on the part of an individual or a group (*i.e.* government) to increase the total satisfaction of human wants by a planned program of use of particular resources, natural, human, and cultural, the apparent goal of such action is to assure an ever-rising living standard for more and more people. The idea of self-denial, except in times of national emergency, is alien to most people. As a result, conservation at times becomes a well-intentioned effort to eat the cake and have it. And therein lies one of the great unsolved conflicts of resource use.

Conservation "Equation"

Any discussion of resource use and conservation must meet these conflicting aims, and it is difficult to find one's way through the welter of controversy and still retain perspective. Because of these difficulties, the following simple "equation" of a national economy was developed. It is helpful in keeping the "eye on the ball" and adds to the discussants' understanding of the inter-relation of resources, satisfactions, and conservation possibilities. This does not purport to be a world-shaking "equation," but it has proved to be a useful device in discussion, and in that spirit it is passed along. Others may find it useful or be inspired to develop a superior device (Equations 1 and 2).

The symbols are, of course, borrowed from mathematics, but the statement cannot be solved in a mathematical sense. First, it is to be noted that all elements in the statement are or can be variables: the quantity, variety, and quality of the natural resources can vary greatly; the size and skill of the labor force is also a variable factor; and finally the know-how and the capital, in the monetary sense, likewise may range widely. This portion of the statement is placed within brackets. The brackets symbolically represent the national boundaries, as well as the mathematical idea that everything within the brackets is modified by the double superscripts "National goals" and "Organization." The manner in which resources are deployed varies from nation to nation and from time to time within the same nation according to the goals of its peoples and the technical arts at their command. Real operation, which is symbolized by the portion of the statement in the first brackets, is thus national production. In place of national, any spatial unit can be inferred.

Three different kinds of goods are produced. Producers' goods (blast furnaces, machine tools, etc.) become a part

[2] Erich Zimmermann, *World Resources and Industries*, 2nd edition, Harper and Bros., New York, 1953, p. 7; and S. V. Ciriacy-Wantrup, *Resource Conservation: Economics and Policies*, University of California Press, Berkeley, 1952, pp. 27-31.

Equations 1 and 2

$$\left[\begin{matrix}\text{NATURAL} \\ \text{RESOURCES}\end{matrix} \times \begin{matrix}\text{HUMAN} \\ \text{RESOURCES}\end{matrix} \times \begin{matrix}\text{CULTURAL} \\ \text{RESOURCES}\end{matrix}\right]^{\text{National Goals, Organization}}_{\rightarrow}$$

$$\left[\begin{matrix}\text{PRODUCER} \\ \text{GOODS}\end{matrix} + \begin{matrix}\text{STERILE} \\ \text{GOODS}\end{matrix} + \frac{\text{CONSUMER GOODS}}{\text{POPULATION}}\right] \text{Distribution} = \text{Standard of Living}$$

EQUATION 3

$$\left[\left(\begin{matrix}\text{PRODUCER}\\ \text{GOODS}\end{matrix} + \frac{\text{CONSUMER GOODS}}{\text{POPULATION}}\right) \begin{matrix}\text{Distribution}\\ -\text{STERILE GOODS}\end{matrix}\right] = \text{Standard of Living}$$

of the cultural resources available for additional production. Sterile goods and services are those products that neither create additional wealth nor directly satisfy basic human wants. The best example of this kind of good is war materiel. In the final "resolution" of the equation, the sterile goods must be subtracted from the sum of goods produced. The third class, consumer goods, directly satisfies human wants and includes the material elements of an individual's standard of living. This class requires modification by population to reduce it to per capita satisfaction and by the method of allocation of these goods. Methods of allocation simply noted as "distribution" cover a whole world of complex ideas which we call "free enterprise," "planned economy," etc.

Modified "Equation"

As was suggested previously, a modification is necessary in that "sterile goods" must be subtracted from the sum total of goods produced for human satisfaction, including producers' goods. Therefore, the second bracket should look like this after a second step in solving the "equation" (Equation 3).

Wherein does this little device help in an understanding of conservation? By permitting one to focus on those items that make conservation possible: national goals, organization, and distribution, while at the same time keeping all other parts of the economy in view. Conservation is a state of mind more than a technical process. For the most part, technical ability necessary to increase the utility of resources is available, but action must be brought to bear through defining national goals and establishing the organization and mental outlook to encourage a program. Perhaps the most important point for emphasis is the superscript "distribution." In a free enterprise society dedicated to "progress," where the goods are distributed through a money mechanism, the increased utility of resources must be made profitable over the long run, or a penalty for unwise use must be imposed.

Undoubtedly, the most wasteful production in terms of human satisfaction is that of sterile goods, and here is the problem of maintaining the greatest of all conservation measures, *peace*.

GEOGRAPHY IN MID-CENTURY: AN ACCOUNT OF A YEAR OF PROGRESS IN UPGRADING GEOGRAPHY INSTRUCTION IN THE NEW YORK CITY JUNIOR HIGH SCHOOLS

JOSEPH O. LORETAN, ASSOCIATE SUPERINTENDENT
Board of Education of the City of New York

September, 1959—June, 1960

SERIOUS concern about the limited approach to the subject of human relations and international understandings and world geography triggered off a series of programs and projects that widened the scope of social studies instruction in the New York City junior high schools during the school year 1959-1960.

The author presented his ideas for extending and upgrading the horizons of teaching broader concepts of international relations in a talk at the 2nd annual Junior High School Principals' Con-

ference held in 1960. "Does the student," he asked principals, "get an introduction to the Soviet Union, China, Japan, Southeast Asia, the Middle East, Africa, and Latin America and to the problems in our relations with them? Is it designed to provide the broad background needed for intelligent citizenship in the growing community represented by the United Nations? If we are to become more efficient," he said, "in competing with some of the bigots in America and the Communists abroad, should we not re-examine not only new theories of perception of learning but also theories of group dynamics, of roles and statuses, of personality, social interactions and social climates?" To do this, he urged the principals to make better use of dramatics, patriotic pageants, oral discussion, visual aids, field trips, and the like.

Prior to this conference, several working committees had been organized to advise and put into operation a number of projects to implement these ideas. An over-all steering committee of assistant superintendents met in June, 1959, to plan the upgrading of "Social Studies 7, 8, 9." In addition, a committee of four selected principals planned and organized four geography centered conferences at their respective schools. Each of these schools made geographic studies in depth of one crucial part of the world where new emerging nations are rapidly entering the world arena.

At each of these conferences every junior high school principal, the assistant principals in charge of social studies, and a key teacher were invited to attend. Conference schools were assisted with materials by the Bureau of Curriculum Research and the Bureau of Audio-Visual Instruction.

Geography Study Center

Both as a concomitant and culmination of these conferences, an exhibit was set up at J.H.S. 167, Manhattan, to display samples of materials that give the latest available knowledge about the world in which we live. This was primarily an exhibit to indicate how geography materials may be used to extend and enhance learnings on the four crucial areas of the world stated above. It also tried to show how modern geography broadens the concept of global approaches to world problems. The exhibit committee was made up of principals, coordinators and teachers.

"Africa Day" was the theme of the first conference at J.H.S. 118, Manhattan.

The principal initiated the preparatory phase of the institute. Since she had recently returned from an extensive tour of Africa, Dr. Sweeting had a good knowledge of what was taking place there. She put some pointed, but simple, questions to the group and found that they were woefully ignorant about precise facts.

The major problem was clearly marked; namely, there was less-than-adequate scholarship on the part of the school's professional staff. In view of this, teachers and assistant principals were eager to accept books and pamphlets when Dr. Sweeting distributed them at the end of these informal meetings. By the time schools closed in June, 1959, almost every member of the faculty had begun to read about Africa as it is today.

Four Pilot Projects

After developing an over-all plan of operation and dividing the work load among the subject departments, teachers moved quickly to the classrooms where a major share of the actual study was carried on. Using pupil-teacher planning as a springboard, classes set up their specific areas of emphasis and then proceeded to work out individual lessons and units based on the theme of the institute. A daily paper called "The African Times" was printed and distributed to all classes. It publicized the work of individual classes and listed materials on

Africa today, such as newspaper articles, magazine features, book reviews, motion pictures, and television programs. Guests who were specially competent on aspects of African life spoke in classrooms and in the auditorium. Parents sent African art pieces and sculpture. Field trips were taken by classes and individual teachers. They attended UN sessions on African affairs, visited museums, interviewed experts at the New School for Social Research, and browsed through library collections.

At every stage of the study, classes took written and oral tests on places, people, and important forces at work in Africa. Learning was also measured by the maturity with which pupils did research and their depth of understanding concepts and values was revealed in daily work.

The conference on Africa Day was organized in two sessions, morning and afternoon. The morning meeting took place in the auditorium where Dr. Leonard S. Kenworthy, Professor of Education at Brooklyn College, delivered the keynote address. Dr. Kenworthy had just returned from Africa and had spoken to leaders of the newly emerging nations and to the people. The four schools planning "Institutes" learned one way of making a study in depth. What they experienced was not intended nor did it in fact become a model to be reproduced. Actually, it served as a stimulus and an inspiration for organizing and developing their own projects.

Curriculum Material Developed

The social studies department prepared a resource unit that served as an over-all general guide from which teachers selected specific topics for their case studies. Some of the major items in the resource unit were:

1. reasons for our interest in this strategic part of the world
2. general identification of geographic factors—land, climate, people, resources, culture
3. problems of this region—geographic limitations, socio-economic backwardness, political struggles for leadership
4. steps being taken to meet these problems by national leaders, foreign assistance, and agencies of the UN
5. geographic insight in how the people live and work
6. "thumbnail" sketches of the countries of the region
7. transition of North Africa and the Middle East from colonial territories to emerging independent nations

Quotations by leading geographers, heads of countries, and international figures and provocative statements in government pamphlets and editorials were duplicated and distributed to classes. These served as bases for discussions, debates, and deeper study. Since many controversial views are expressed about North Africa and the Middle East, special care was taken so that all sides of issues were presented.

A central library of reading materials was organized, and teachers and pupils read a great variety of books, pamphlets, news clippings, and periodicals. Each teacher received a classified bibliography that was organized by topics.

Revising Geography Concepts

The conference on January 28 featured Dr. Preston James, geographer and author from Syracuse University. In a keynote talk during the morning session, he stressed many new geographic concepts that have been developed in recent years and why teachers must continuously keep themselves up to date on climate, global relationships, ocean currents, winds, storms and topography. He pointed to several examples in cultural

and physical geography that are still being taught but are no longer valid in the light of modern research. One of these is the persistence in teaching zones as a basis for explaining climate. This is faulty when modern research shows that the temperatures in Death Valley, California, (North Temperate Zone) gets higher in the summer than any spot in the equatorial regions (Torrid Zone). Another example of outdated teaching in geography is the making of generalizations about people who live in deserts, mountains, valleys, villages, cities, and rural areas. The theory that the influence of natural environment on human life is only one of limitation is out of date in the light of desert reclamation projects, conversion of salt water to sweet water, harnessing large rivers to provide hydro-electric power and flood control, and agrarian land reform programs. In giving these and other dramatic and dynamic illustrations, Professor James showed geography to be a living and ever-changing phenomenon that man must understand if he is to exercise intelligent and responsible citizenship in the modern world.

Resource Center for Far Eastern Studies

Geography of the Far East, the theme of the third conference, was the culmination of many months of intensive work at J.H.S. 35, Bronx. Every class in the school was involved in studying some aspect of life in the Far East, and the learnings were coordinated to enrich all the courses of study in the curriculum. Examples of these enrichment lessons were:

Painting Life in China
7th Year Art
Stories of the Far East for Baby Sitters
8th Year Child Care
Rehearsal of Overture to Mikado
8th Year Music
Costumes for Oriental Festival
9th Year Industrial Art
Multiplication of Binary System
9th Year Mathematics
Famous Chinese People
9th Year Social Studies
Creating Original Oriental Masks
9th Year Art
Navigation in the Orient
9th Year Science
Appreciating Oriental Poetry
9th Year Language Arts

All the monthly faculty conferences spotlighted activities that were pertinent to the geography institute. Guest speakers experienced in areas of Oriental life discussed their ideas with teachers and pupils. Special assembly programs were arranged to give additional stimulus. In one of these, a physician from India discussed some of the most important health problems in his country and how his government was seeking to meet them. At another assembly, a Japanese actress spoke on the cultural life in Japan and contrasted this with life in America. First, the student production for 1959-60 was Gilbert and Sullivan's "Mikado." Second, the school magazine gave most of its space to the work of the institute.

The conference itself consisted of three main parts. The morning program was a discussion of current happenings in the Far East in which Mrs. Eleanor Roosevelt and Mr. Henry Lieberman, Far East reporter of the New York Times, gave their views and personal experiences. Of the main questions discussed, the following were the most challenging:

1. How can we prevent communism from spreading in the underdeveloped nations?
2. Should Communist China be admitted to the United Nations?
3. Why is American and Western prestige failing in Asia and in many newly emerging nations in other parts of the world?
4. How can we arouse young people to become vitally concerned with the problems of people in Asia?
5. Can neutralism work in the Far East?

In the afternoon, the principals and

assistant principals met in panels, each led by an assistant superintendent and aided by a resource person. The panel topics were: (1) Utilization of Controversial Materials and People in the Teaching of Social Studies, (2) The Place of Literature in a Social Studies Setting, (3) Changing Concepts of Supervision (New emphases on geography and cartography as they fit into social studies learnings), and (4) Necessary Adaptations in the 9th Year Course of Study to Meet Changing Conditions in the Far East.

Latin America Study

The final institute for 1959-60 was held at J.H.S. 45, Manhattan. It was on Latin America. Like the other three institutes, the faculty at J.H.S. 45 spent many months making studies in depth of nations in their assigned region. Their theme was "Latin America Today." An initial phase of the project was a survey of origins of pupils, parents, and teachers. This revealed that 21 pupils, 64 parents, and 4 teachers came from areas in Latin America, exclusive of Puerto Rico. Fifty-four per cent of the pupil population (1,560) had Latin American origins, the majority coming from Puerto Rico. This survey showed that an important source for getting first-hand information about life and customs of the people in this part of the world was in the school and the local community. Throughout the course of the project these sources were tapped and opened new vistas in learning about the topic.

While the institute prepared for its conference day, several whole school programs were in operation. A large percentage of the time spent at faculty meetings was given over to work directly associated with the institute. Teachers who had visited or lived in Latin America presented excerpts of their experiences at these faculty conferences and in school assemblies. They loaned their personal souvenirs (money, stamps, pottery, jewelry, clothing, silver, pictures, etc.) for exhibits in the school lobby and classrooms. The school librarian set aside a section of the library for research materials. At times, whole classes were taken to the library and lessons on how to use reference materials for finding specific information were given. Some classes took trips to the Hispanic Museum, the Museum of Modern Art, and the Museum of Natural History. Members of the staff visited schools that had made detailed studies on Latin America. They came away with new ideas for constructing three dimensional dioramas and other visual displays. Pupils and teachers viewed television programs and listened to radio programs. Some of the better radio broadcasts were put on tape and circulated among classes. During the pilot study, at regular intervals, "bulletins" were put out. They included facts and concepts, suggested approaches and teaching methods, quizzes, research materials, enriched readings and the like. The first bulletin, for example, indicated that Latin America could not be understood until students rid themselves of many artificial ideas about this part of the world. These ideas are the product of moving pictures and books that present the bizarre rather than the realistic aspects of life in the nations to our south. Although there is a basic pattern to much of Latin America, there are also so many differences that to attempt to identify a "typical" Latin American is incomprehensible. In view of this, students and teachers had to unlearn many stereotyped notions and approach the study objectively and with clarity. When this had taken place, the constructive phases of the institute began to take shape.

The conference ended with a panel discussion in which the participants were: Mr. Joseph Monserrat, Director of the Puerto Rican Division of Migration, Mrs. Vasconcellos, Consul General of

Brazil, Dr. Clarence Sorenson, Geographer, Mr. Clarence Senior, Consultant to the Puerto Rican Secretary of Labor, and Mrs. Ruth Gruber Michaels, author and journalist. Mrs. Dorothy Gordon of the New York Times Youth Forum was the panel moderator.

The panel made these major points:

1. A knowledge of the background of Latin America will help us see the cultural roots of some of the customs there.
2. A knowledge of geographic factors will enable us to understand why Latin Americans have failed to fully develop their natural resources.
3. Learning about important developments in the history of this region will bring a new respect for the contributions of the Spaniards and Portugese as well as for the liberators who struggled for independence from European control.
4. Examining the social and economic progress of countries of Latin America will create a climate of positive approaches rather than unrealistic views currently held by many North Americans.

In summary, the four geography institutes should not be measured by how well or how poorly the teachers and pupils performed on conference days. Nor should one institute be compared with another. The real value of the institutes is that they pointed up to supervisors and teachers that pupils in junior high schools can undertake a study in depth of current world problems, and that the curriculum adequately provides for a broad background essential to intelligent citizenship in a changing world community. Social studies teachers and supervisors have to upgrade and update the curriculum by alerting themselves and their pupils to important happenings in the world scene. Then, they must immerse themselves in the most recently published materials and other sources of information so that their own horizons are extended. In this connection, it becomes necessary to discard many traditional geographic concepts because they no longer apply in the world in which we now live. Finally, they must examine all devices and methods in the teaching-learning process, the traditional practices as well as the newer theories, to find ways in which global thinking and international understanding replace isolated and provincial approaches to problems in human relations.

City Wide Exhibit the Basis for Teacher Training

Although the exhibit was primarily designed for supervisors and teachers, some students were invited to come. Classes at J.H.S. 167 used the editorial approaches and the materials to enrich the learnings in social studies. In June, 200 students who had made the highest scores on standardized tests met at J.H.S. 167 and viewed the exhibit as part of the day's activities.

In a real sense, the exhibit served as an inspiration for supervisors and teachers to discover new ways of utilizing geography materials and to learn where these materials may be obtained. The impact of this project on local schools is the true measure of its success.

Assistant Principals Steering Committee

Perhaps the most far reaching work on a city-wide basis in implementing the "Geography in Mid-Century" was done by this committee. A group of ten assistants carefully studied the exhibit at J.H.S. 167 and the pilot studies in the four geography institutes. Each of the ten assistants then met with from ten to twelve other assistant principals in local school districts and provided direction for carrying out the program on a local level. In this way, every assistant principal in charge of social studies in 126 junior high schools became actively engaged in providing

sources of information, methods of teaching geography, and skills in arranging and displaying geography materials. Since, in most cases, teachers and supervisors lacked adequate information about the interaction of land and people and the underlying causes of world tensions, each member of the steering committee studied one of the four crucial areas in depth and the other 125 assistants became knowledgeable in geography and world affairs as they affect people today. This began with several visits to a central geography exhibit. For the remainder of the school year, the steering committee met several times and worked in various ways to implement their plans. The major contribution the committee made was in drafting a geography study guide in which the plans and practices of teaching geography in junior high schools were outlined. The guide was distributed to all schools for study, experimentation, and evaluation. It represented a compilation of the best practices used in the schools. The main topics contained in the guide were: (1) suggestions for enriching the geography program, (2) suggestions for teaching geography to slow learners, (3) evaluation checklist for supervisors and teachers in geography in grades 7, 8, 9, (4) emphasizing geography in the 7th and 8th years, and (5) graded map skills in grades 7, 8, 9.

These in essence were the steps taken in 1959-1960 to upgrade and update geography instruction in the junior high schools. The impact of rapidly changing events on people everywhere and the need for a broad and thorough approach to problems of human relations and international understandings clearly pointed to a critical examination of our curriculum and the methods we use in teaching social studies. Once we accepted our own inadequate fund of knowledge of people living in two-thirds of the world and the need to replace outdated statements in many textbooks with realistic facts, we could then set our sights on finding new ways to utilize the best ideas and practices.

THE NATIONAL COUNCIL AT WORK

NCGE ANNOUNCES AWARDS TO OUTSTANDING 1961 GRADUATING SENIORS

The National Council for Geographic Education announces annual awards to outstanding seniors who graduated in 1961 with a major in geography. The purpose of these awards is to recognize excellence of scholarship and to help geographers, early in their careers, to become identified with the work of the National Council.

At its last meeting, the Board approved the following students to receive the 1961 awards:

1. Mr. William Rule Anderson, Hastings College, Hastings, Nebraska
2. Miss Nancy C. Baldridge, Wellesley College, Wellesley, Massachusetts
3. Mr. Forrest S. Ballieu, Nebraska State Teachers College, Chadron, Nebraska
4. Mr. Douglas Kent Bereuter, The University of Nebraska, Lincoln, Nebraska
5. Miss Ida I. Bowers, Central Michigan University, Mt. Pleasant, Michigan
6. Mr. Allen Carley, State University College of Education, Cortland, New York
7. Miss Carol Ann Connelly, Montclair State College, Upper Montclair, New Jersey
8. Mr. Claude Curran, Chico State College, Chico, California
9. Mr. Edgar Mason Cushard, Mansfield State College, Mansfield, Pennsylvania
10. Mr. Kenneth Ellsworth, Carroll College, Waukesha, Wisconsin
11. Mr. Charles Good, Trenton State College, Trenton, New Jersey
12. Miss Betty Jane Grisinger, State Teachers College at Towson, Baltimore, Maryland
13. Mr. Sam M. Hillard, State Teachers College, Edinboro, Pennsylvania
14. Mr. William Imperatore, State Teachers College, Slippery Rock, Pennsylvania
15. Miss Gayle E. Janosko, State College, California, Pennsylvania
16. Mr. Ronald Kuipers, Michigan State University, East Lansing, Michigan
17. Mr. Robert E. Logan, Western Illinois University, Macomb, Illinois

18. Mr. John C. Mateer, The University of Oklahoma, Norman, Oklahoma
19. Mr. James L. Newman, University of Minnesota, Minneapolis, Minnesota
20. Mr. Robert S. Pasierb, Indiana State College, Indiana, Pennsylvania
21. Miss Susan Helen Perham, The University of Michigan, Ann Arbor, Michigan
22. Mr. Alex Revering, DePaul University, Chicago, Illinois
23. Mr. Richard F. Rowe, San Diego State College, San Diego, California
24. Miss Sharon G. Soule, Arizona State University, Tempe, Arizona
25. Mrs. Inge S. Thomas, University of Missouri, Columbia, Missouri
26. Mr. Robert Phillip Wright, Montana State College, Bozeman, Montana

LORRIN KENNAMER, *Secretary*

MABEL L. McGIRR WINS GEOGRAPHIC EDUCATION AWARD

The Geographic Education Award of THE JOURNAL OF GEOGRAPHY, named in honor of Zoe A. Thralls, is granted this year for the best article on the teaching of geography at the Secondary School level (grades 7-12) printed in the 18 issues between September, 1959, and May, 1961. The selection committee, consisting of Neville V. Scarfe, John A. Bonham, and Ralph E. Olson, recommends that the 1961 Zoe A. Thralls Award be presented to Miss Mabel L. McGirr of North Bethesda Junior High School, Bethesda, Maryland, for her article entitled "Junior High Geography—Growing Pains or Arrested Development?" The article was published in the May, 1961 issue of THE JOURNAL OF GEOGRAPHY.

SAMUEL VAN VALKENBURG RECEIVES DISTINGUISHED SERVICE AWARD

The Distinguished Service Award represents the highest honor that the National Council for Geographic Education can confer on an individual. The recipient of this Award is recognized for contributions to the understanding and advancement of geography.

This year, the 1961 Award goes to one who is not only an internationally known geographer and writer but also a renowned teacher and administrator. He has traveled widely throughout the world—the Middle East, Southeast Asia, Australia and Latin America—and has made intensive studies of many parts of Europe west of the U.S.S.R. In addition to this he has studied and lectured in many universities abroad. He earned his doctorate at the University of Zurich. The extensive travel and study at several foreign universities outside of the United States is one indication of his knowledge of foreign languages. His linguistic ability is much in demand at International meetings where his aid is often sought at the registration desk to help an African, German, Swiss, Frenchman, Balinese, Hindu or Moslem furnish the required information.

Equally important with professional research, scientific contributions and travel in the character of a great teacher, such as the recipient of the Award this year, are certain personal qualities. Among them are his interest in the difficulties of students (desire to help them or to supply adequate information which makes possible this aid). The door of this graduate school professor is always open to the students of his institution, and advice or assistance in resolving problems is always available. His keen sense of humor, his ability to visualize geographically plus his great storehouse of knowledge make him a much sought after speaker and resource person by both private and public agencies.

He is regularly in attendance at the meetings of the National Council for Geographic Education where he has held several offices and addressed the group several times. He has served on many committees and panels. In addition he is active in other recognized organizations; he is a member of the New England and St. Lawrence Valley Geographical Conference, Association of American Geographers, International Geographical Union and the National Research Council.

He has published a long list of geographical articles which have appeared in many periodicals and authored three books. He has received honors and awards for serving in several capacities during the Second World War.

In recognition of his contributions to the field of geography, his inspiration to a vast number of geographers, his administration of a great graduate school of geography, his world vision, and his work in the National Council for Geographic Education, the Distinguished Service Award of the National Council is given to a Clark University Professor of Geography and the Director of the School of Geography, Clark University, Dr. Samuel Van Valkenburg.

The DSA Committee of NCGE for 1961 was as follows:

Norah Zink, Chairman
Otis W. Freeman
Ina C. Robertson
Zoe A. Thralls
Henry J. Warman
President Jewell Phelps, Ex-officio
Secretary Lorrin Kennamer, Ex-officio

GEOGRAPHIC MATERIALS RECEIVED

Miriam Schlein. **The Sun, The Wind, The Sea and The Rain.** Abelard-Schuman Limited, 6 West 57 Street, New York 19, N.Y., 1960. Unnumbered pages; illustrations by Joe Lasker. $2.75.

S. H. Steinberg, editor. **The Statesman's Yearbook: 1961-1962.** St. Martin's Press, Inc., 175 Fifth Avenue, New York 10, N.Y., 1961. 1684 pages with table of contents, maps, and index. $9.50.

Arnold J. Toynbee. **Between Oxus and Jumna.** Oxford University Press, 417 Fifth Avenue, New York 16, N.Y., 1961. 211 pages with table of contents, illustrations, and index. $5.00.

Frances H. Kohan and Truda T. Weil. **Juan's Adventures in Mexico.** Noble and Noble, Publishers, Inc., 67 Irving Place, New York 3, N.Y., 1961. 183 pages with table of contents, chapter study helps, illustrations, and suggested reading list. $3.00.

Sabra Holbrook. **Capital without a Country: The Challenge of Berlin.** Coward-McCann, Inc., 210 Madison Avenue, New York 16, N.Y., 1961. 121 pages with table of contents, illustrations, and index. $2.95.

Wilma Pitchford Hays. **The Hawaiian Way.** Coward-McCann, Inc., 210 Madison Avenue, New York 16, N.Y., 1961. 72 pages with table of contents, illustrations by Charles G. Chu, and pronunciation section. $2.75.

Winifred Hammond. **Rice: Food for a Hungry World.** Coward-McCann, Inc., 210 Madison Avenue, New York 16, N.Y., 1961. 160 pages with table of contents, photographs, and index. $3.50.

Dr. Fan Parker. **The Russian Alphabet Book.** Coward-McCann, Inc., 210 Madison Avenue, New York 16, N.Y., 1961. 40 pages with illustrations and history chart. $2.95.

Harry C. Rubicam, Jr. **Men at Work in the Great Plains States.** G. P. Putnam's Sons, 200 Madison Avenue, New York 16, N.Y., 1961. 123 pages with table of contents, photographs, and index. $3.00.

Clyde H. Duncan. **Find a Career in Agriculture.** G. P. Putnam's Sons, 200 Madison Avenue, New York 16, N.Y., 1961. 160 pages with table of contents, photographs, glossary, and index. $2.75.

John C. Caldwell. **Far East Travel Guide,** revised edition. The John Day Company, Inc., 200 Madison Avenue, New York 16, N.Y., 1961. 243 pages with table of contents, maps, and index. $4.50.

John C. Caldwell. **Let's Visit Brazil.** The John Day Company, Inc., 200 Madison Avenue, New York 16, N.Y., 1961. 96 pages with table of contents, photographs, and index. $2.95.

Anita Brooks. **The Picture Book of Tea and Coffee.** The John Day Company, Inc., 200 Madison Avenue, New York 16, N.Y., 1961. 96 pages with table of contents, photographs, and index. $2.86.

Henry B. Lent. **Men at Work in the Mid-Atlantic States.** G. P. Putnam's Sons, 200 Madison Avenue, New York 16, N.Y., 1961. 192 pages with table of contents, photographs, and index. $3.50.

John C. Caldwell and Elsie F. Caldwell. **Our Neighbors in the Philippines.** The John Day Company, Inc., 200 Madison Avenue, New York 16, N.Y., 1961. 45 pages with table of contents, photographs, and illustrations by Heidi Ogawa. $2.00.

John C. Caldwell and Elsie F. Caldwell. **Our Neighbors in Korea.** The John Day Company, Inc., 200 Madison Avenue, New York 16, N.Y., 1961. 48 pages with photographs and illustrations by Heidi Ogawa. $2.00.

S. A. Barnett and Anne McLaren, editors. **Science Survey 1961: 2.** Penguin Books Inc., 3300 Clipper Mill Road, Baltimore 11, Md., 1961. 250 pages with table of contents, figures, tables, plates, and notes on contributors. $1.45.

Patricia H. Suttles, editor. **Elementary Teachers Guide to Free Curriculum Materials,** 18th edition. Educators Progress Service, Box 497, Randolph, Wis., 1961. 312 pages with table of contents, title index, subject index, source index, and 34 pages of illustrative units. $7.50.

BOOK REVIEWS

Irving Werstein. **The Blizzard of '88.** Thomas Y. Crowell Co., 432 Park Avenue South, New York 16, N.Y., 1960. 157 pages with 36 illustrations. $4.50.

A late-winter snowstorm in 1888 has become the almost legendary standard to which all raging snowstorms in the northeastern United States must be compared for a rank of severity. After seventy years of legend-building, a book has been written to return the tales of that storm to the focus of those who lived through it. *The Blizzard of '88* is a lively chronicle of people's actions in and reactions to the perhaps unequalled snowstorm, based on accounts written in newspapers, magazines, and other records of the time.

This is a book about the way the storm affected both individuals and groups. It is woven of many anecdotes like those about young Sara Wilson's fateful first train trip to New York City, Ed Meisinger's ridiculed snow shovel purchase, reporter William Inglis' frightful days aboard Pilot Boat No. 13, Fire Chief Shay's "three sixes" fight with snow-clogged streets and iced-up hydrants, the rowdy party of stranded ferry passengers, and the philanthropy and profiteering

as fuel and food ran out in transportation-less cities. Nearly every page illustrates the vulnerability of man himself and the things he had built, the frustration, discomfort, ingenuity, stubbornness, defeat, inadequacy, survival, heroism, and death in struggling against possibly the worst combination nature could produce of plunging temperatures, unexpected ice, howling wind, and enormous snowdrifts.

Meterological description in the book occasionally seem unrealistic but may well represent the meterological thinking of the 1880's. The parenthetical implication that the "fall" of snow in Pittsfield was twenty feet is the only really questionable fact about the storm itself. It is a little deflating that so few of the pictures convey a storm any worse than several experienced in the northeast quarter of the United States in recent winters. The roles of existing weather observing practices and forecast dissemination in accentuating the impact of the storm are clearly shown. Much of the text yields the impression that reasonably few stories about the blizzard had accrued gross over-exaggeration through the years.

The Blizzard of '88 should not fail to help perpetuate the storm, although paradoxically there may be clues that will assist in dethroning it. The book is likely to be particularly sought each time a challenger snowstorm piles drifts on the Northeast.

GEORGE M. HOWE
The Travelers Research Center, Inc.
Hartford, Connecticut

George Miksch Sutton. **Iceland Summer: Adventures of a Bird Painter.** University of Oklahoma Press, Norman, Okla., 1961. 253 pages with frontispiece, bird paintings, photographs and index. $5.95.

While this book is fundamentally the account of the adventures of an Ornithologist, it is an exciting creative story of an experienced field worker who is also a good scientist. Here is good literature written with good objectivity, yet fine sensitivity to the values which interest students of contrasting climes and Biota.

Iceland is a place where the climate, the geological phenomenon and the biology, affected by its latitude and oceanic surroundings, exhibits a very dynamic ecology in summer. In fact spring, summer and fall telescope together in this northland. The long hours of daylight become an important factor in ecology, as well as the working day of the naturalist. Cascading streams appear and the permanent frost line may be seen receding. Great food resources of the sea are nearby for bird and man. These largely affect the nature of the biological community. This as well as the geological show is impressive.

There are 17 paintings of birds including a beautiful frontispiece in color and 8 excellent photographs which illustrate the variety and extent of Icelandic scenery. There are landscapes where oceanic conditions provide a quality of light and freedom from dust that make possible depth and excellent detail.

The episode of falling into a ditch illustrates the ease with which an explorer, working alone, may get into serious danger. Readers interested in any of the outdoor disciplines will find in this work something to sharpen the imagination and the inspiration.

ROBERT A. JOHNSON
Indiana University

David Lowenthal, editor. **The West Indies Federation: Perspectives on a New Nation.** American Geographical Society, Research Series Number 23, Columbia University Press, New York City, New York, 1961. 142 pages including index, illustrations and reading list. $3.00.

This book is a series of four essays, written by two Canadians, a West Indian and an American, which collectively present an excellent and up-to-date picture of the West Indies for the general reader. The first essay is concerned with the contemporary economic problems facing the new island federation in its transitional state. The difficulties of unifying the economies of the major individual islands and the problems of changing the dominant agricultural economy into a more diversified one are stressed. The other essays deal with the historical patterns of the islands and the importance of past traditions and institutions in the present day scene; the strengths and weaknesses of the governmental structures, political development and the rise of local nationalism; and the sociological framework of the islands and the culture and values of the West Indian. The latter essay is an excellent description of the living conditions, education and attitudes of the people.

The essays, written by competent social scientists in their fields, are well integrated into a central theme. The book is easily read and highly valuable as a resource book concerned with a general geographical analysis of this part of the world. There is one general locational map; an up-to-date table illustrating area and past and present population statistics; and a complete annotated reading list of over 200 selected articles covering the physical geography, history, government and contemporary affairs of the West Indies.

JOHN F. LOUNSBURY
Eastern Michigan University

S. P. Suslov. **Physical Geography of Asiatic Russia** (edited by Joseph E. Williams and translated by Noah D. Gershevsky). W. H. Freeman and Company, 660 Market St., San Francisco 4, Calif., 1961. 594 pages with maps, photographs, diagrams, drawings, plant index, general index and table of contents. $15.00.

The appearance of an English translation of the late S. P. Suslov's definitive study of the physical geography of Soviet Asia is a major contribution to our rather limited knowledge of this enormous and diverse area. The Russian original of this book was published in 1947 and a revised second edition came out in 1956. At

(Continued on page 440)

EUROPEAN GEOGRAPHY FIELD TRIP

(Fjords of Norway to Sicily)

WATERLOO UNIVERSITY COLLEGE

In Co-operation with CANADIAN YOUTH HOSTELS ASSOCIATION)

SUMMER 1962 (July 2nd to August 30th)

A credit course (or not), advanced regional studies: fourth year honors, three hours academic year (Canada) or six hours semester credit (U. S.)

Open to: advanced undergraduates or graduate students in geography: teachers of geography at secondary or college level: applicant's wife or husband. All applicants must be mature and in perfect physical condition.

Cost $995.00 (All inclusive except tuition)

For Additional Information Write:

DR. AUBREY DIEM

Geography Dept.

WATERLOO UNIVERSITY COLLEGE

Waterloo, Ontario, Canada

—Outstanding McGraw-Hill Texts—

PRINCIPLES OF CARTOGRAPHY

By **ERWIN RAISZ,** formerly of the Universities of Florida and Virginia, and of Harvard University. *The McGraw-Hill Series in Geography.* Available in May, 1962.

Smaller, and somewhat simpler and more practical than Raisz's GENERAL CARTOGRAPHY, this text is intended to help students understand the language of maps; enable them to draw their own maps for theses and publication; and give them a foundation for more specialized work if they desire to become professional cartographers. Covers the basic concepts of the whole field, from which selections can be made for individual needs.

THE GEOGRAPHY OF ECONOMIC ACTIVITY

By **RICHARD S. THOMAN,** Queens University, Ontario. *McGraw-Hill Series in Geography.* 608 pages, $8.95.

An introductory textbook designed for the first course in economic geography. The divisions between technically advanced and underdeveloped countries and between Communist and non-Communist realms of influence are emphasized in the process of trying to understand more fully the location and functioning of economic activity in the various parts of the world. Avoiding an encyclopedic recital of elementary economic and geographic facts, the author develops "a definition of the field" and applies the definition to selected world patterns of economic activity.

PHOTOGEOLOGY

By **VICTOR C. MILLER,** Miller & Associates, Inc., Denver, Colorado. 249 pages, $13.50.

A text for graduate and advanced undergraduate courses in photogeology or photogeologic interpretation covering briefly the concepts of aerial photography and photogrammetric instrumentation, and then, in greater detail, stereoscopy and procedures. Of especial interest is the final third of the text which contains stereopair aerial photographic illustrations accompanied by individual texts, exercises, and pertinent topographic or geologic maps, sketches and cross-sections.

send for approval copies

McGraw-Hill Book Company, Inc.
330 West 42nd Street New York 36, N.Y.

RONALD books for geographers . . .

A Geography of Europe

Including Asiatic U.S.S.R.

Edited by **George W. Hoffman,** *University of Texas*

Second Edition of this basic textbook introduces the student to Europe's complex physical and historical background. It presents authoritative geographical descriptions of its seven major regions; provides an integrated picture of the European scene within the context of political, natural, and cultural regions. A summary chapter assesses various regional problems; brings into perspective Western Europe's struggle to regain its place in the world economy in competition with Soviet Europe. *"An excellent introduction to modern Europe."*—**P. P. Karan,** *University of Kentucky. 9 Contributing Authorities. 2nd Ed., 1961. 815 pp., illus.* $9.50

A World Geography of Forest Resources

Edited by **Stephen Haden-Guest, John K. Wright,** *and* **Eileen M. Teclaff**

Leading national and international experts appraise the world's forest resources in terms of their natural functions and consider the problems of sustaining forest yields in the face of ever-growing demands. Book shows the relationship of forests to rainfall and temperature, topography and soils; to human populations, institutions, and needs. *"Extremely valuable."*—FOREST SCIENCE. *Edited for the American Geographical Society. 35 Contributors. 1956. 790 pp., illus.* $15.00

The Geological Evolution of North America

A Regional Approach to Historical Geology

Thomas H. Clark *and* **Colin W. Stearn** *—both McGill University*

This well-balanced textbook covers the continent's evolution in terms of its three major structural units: the Appalachian and Cordilleran geosynclines, the stable interior, and the Canadian shield. Book emphasizes the connection between the structural behavior of the geosynclines, basins, and shelf areas, and the pattern of sediments deposited in them. A separate section is devoted to the evolution of life in North America. *"Skillful treatment of a complex subject."*—AMERICAN SCIENTIST. *1960. 434 pp., illus.* $7.50

THE RONALD PRESS COMPANY
15 East 26th St., New York 10

FOCUS

A Publication of The American Geographical Society

In today's fast-moving world, teachers and students alike need to understand the peoples of other lands—their ways of life, their physical environments, their problems. Illuminating current world affairs, FOCUS helps to provide just such understanding. Each issue presents a brief, readable, up-to-date survey of a country, region, or resource. Published monthly except July and August. Subscription: $1.00.

FOCUS
American Geographical Society
156th Street and Broadway New York 32, N.Y.

Book Reviews

(Continued from page 438)

present, the second edition serves as the standard textbook for courses on the physical geography of Soviet Asia in Soviet universities and pedagogical institutes.

The organization of this book reflects the lifelong interest of the author in regional physical geography. Suslov does not treat Soviet Asia as a single geographic region. Instead, he confines his discussion to a regional framework consisting of four broad regions, Westen Siberia, Eastern Siberia, the Far East and Central Asia, and fifteen subdivisions of these regions delimited primarily on the basis of geomorphological criteria. Within each of these sub-regions, this book provides a detailed description of the major components of the natural environment.

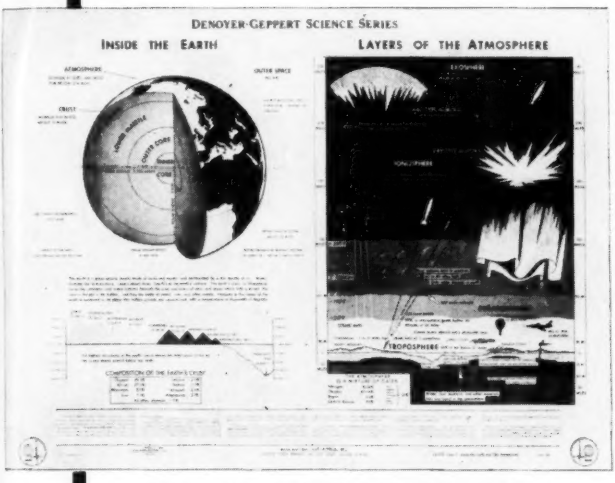
The text is supplemented by 50 maps and numerous photographs. However, despite the number of maps, innumerable distributions described in the text are not depicted cartographically. In addition, the lack of a general summary chapter and the price of this book (fifteen dollars) might also be cited as drawbacks. But these and other possible criticisms seem relatively unimportant when balanced against the value of this work in enhancing our understanding of the physical geography of a vast and little-known area.

ROBERT N. TAAFFE
Indiana University

SCIENCE OF THE EARTH

Group II of New Denoyer-Geppert Science Series

12 COLORED RESOURCE CHARTS **EACH 54x44"**



DGSII-6 Inside the Earth and Layers of the Atmosphere

A Natural Integration of Science and the Social Studies

SCOPE AND PURPOSE

The visual format possesses a built-in self-teaching organization. It is possible to use the charts in the primary grades without need for children to read the text, which for upper grades provides additional information. Each chart is self-contained, with each item inter-related to every other item.

For a child seeking specific information, the charts provide great quantities of information visually arranged so the facts are presented in meaningful relationship to the topic in which they appear.

LIST OF CHARTS

1. Picture History of the Earth
2. The Earth as a Sphere
3. Relationships of the Earth and Sun
4. Maps
5. Time
6. Inside the Earth and Layers of the Atmosphere
7. Wind Systems of the Earth
8. Changing Surface of the Earth
9. Rocks and Minerals
10. Rocks and Soils
11. Water on the Earth
12. Conservation

Available in various mountings

Write for Circular S31b for full details

DENOYER-GEPPERT COMPANY

5235 Ravenswood Avenue **Chicago 40, Illinois**

Deal with those who deal with us—Write Our Advertisers

Rand McNally Announces

A NEW, COMPLETE POLITICAL MAP SERIES OF THE WORL

UNITED STATES
65″ x 45″ • $18.75
NORTH AMERICA
45″ x 65″ • $17.25
SOUTH AMERICA
45″ x 65″ • $17.25
AFRICA
45″ x 65″ • $17.25
SOVIET UNION
65″ x 45″ • $18.75
ASIA
65″ x 47″ • $18.75
AUSTRALIA
65″ x 45″ • $18.75
EUROPE
65″ x 45″ • $18.75
WORLD
65″ x 45″ • $18.75

This new Rand McNally map series brings today's world into the classroom, because each map is an up-to-date and complete political presentation of an area. All political data on these maps is based on the most recent information from government agencies and other reliable sources. Clear, bright colors are used to distinguish all political units. Major cities, boundaries, transportation routes, lakes, rivers, mountains and elevations are all vividly illustrated.

For information write: MR. IVAN MALLON,

RAND McNALLY, P.O. BOX 7600, Chicago 80, Ill.

Mention the JOURNAL—It Assures Service